An Address

ON

THE MODERN TREATMENT OF FRACTURES.

DELIVERED AT THE ANNUAL MEETING OF THE CARDIFF MEDICAL SOCIETY ON JUNE 4TH.

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GENTLEMEN,—I no doubt owe the honour you have done me in asking me to deliver an address on this occasion to the fact that I am an old student of the British universities. When I was a young man, soon after completing my studies in Paris I paid a visit to this island, early enough to see the surgical science of Lister at its dawn, and I am happy to-day to remember and to state that since that time I have been among those who have always rendered just homage to the science of your country. This is not because, like certain philosophers, I think that Science has no country; on the contrary, I believe that we ought to be as proud of our country's men of science as of our great soldiers. But the man of science is fortunate in that he is imbued with an additional sentiment added to the love of his own country, and that is a sincere admiration and brotherly sympathy for all those who in foreign countries have enriched the science to which he himself has devoted his life.

The best way of proving sympathy and sincere admiration for a scientific association which meets to celebrate a long and laborious past is to present to it a review of a subject to which the speaker has for many years himself given much attention. I propose, therefore, on this occasion to speak on the modern treatment of fractures, not only because I believe firmly in the efficacy of a mode of treatment which I myself introduced, but also because the profession in this country is still under the influence of the righteous emotion caused in the surgical world by the unjust accusation to which your compatriots were subjected.

That it is possible for such injustices to occur is due not merely to the existence of a feeling unfriendly to the medical profession, but also to the important changes which the method of treating fractures has recently undergone, changes not fully known to the medical world, and still more imperfectly known to the non-medical public. The importance and gravity of the subject will, I hope, interest you sufficiently to induce you to forgive any deficiencies in my address.

TREATMENT BY REDUCTION AND SPLINTS.

The truth is that within recent times the classical treatment of fractures has been undergoing a radical change.

It is a remarkable fact that the treatment of fractures, the beginnings of which go back so far into the mists of time that we have no idea of the era when splints and treatment by immobilization were invented, has always rested upon the same data and upon the same principles ever since the first beginnings of the science of surgery.

Read any treatise on fractures, from the most ancient to the most modern, from Hippocrates to Ambroise Paré, to Dupuytren and Malgaigne and Hamilton; read all the encyclopaedias, even the titles of which I cannot enumerate—every one of them will tell you that movement is the enemy of the formation of callus, and of bony repair; that it is an obstacle to the formation of callus, so that defective consolidation, whenever it is observed, is attributed to movement having been permitted. In order to obtain the union of fractures, all practitioners have taken account of one fact alone, that a bone is a rigid lever. When it is broken the fragments must be fixed in the position of the normal bone and immobilized. To reduce and to immobilize are the only measures upon which attention is riveted.

Ambroise Paré, the first surgeon who boldly relied on his own personal observation, whose imagination was always alive to find out something new, often hesitates between his own imagination and the ancient traditions as to fractures; but he ends up always with remarks which impel him to greater exactness and greater violence to ensure the reduction of fractures and their maintenance in position. Beyond this he gives information only as to the drugs which might favour the production and the union of bone. With the exception of this last point, the aims of Dupuytren, of Malgaigne, and of Hamilton are exactly the same, although, like all nineteenth century writers, being convinced that they possess much more accurate views on anatomy and physics than the older writers, they apply procedures for reduction and maintenance still more rigorously, and invent new details in the methods of reduction and in splints.

The strange thing is that they are so persuaded that they really reduce fractures, and that they favour union by immobilization, that they pay little or no heed to clinical observation. It does not occur to them to try any other means. If their results are bad, their only thought is to attribute the failure to the inadequacy of the means of reduction and immobilization which they had adopted.

Here and there in their writings on fractures it can be clearly perceived that some great observers were disturbed by facts which as it were struck them in spite of themselves. Malgaigne had indeed seen untoward results due to muscular contraction in fractures of the lower limb, and he thought that in the inclined plane he had found a means of preventing them. Hamilton, speaking of fractures of the elbow, recommends that the fragments should be immediately mobilized at the risk of not obtaining good adjustment, because it is essential to prevent ankylosis. Velpeau recommended that in fracture of the radius the splints should never be tightly applied, for fear of causing permanent ankylosis. The doubts expressed by these surgeons show that the evil consequences of immobilization could not have been altogether unknown to them, yet not one of them was bold enough to run counter to accepted opinions; all soon returned to the employment of the most complete possible immobilization after the most violent reduction. We find the greatest surgeons devising most extravagant appliances, such as Dupuytren's splints for fracture of the radius, the action of which is utterly futile, because, from a *point d'appui* in itself detestable, it has to oppose the contraction of the muscles, and the cicatricial contraction at the site of the fracture; or again, that apparatus of Desault for fracture of the clavicle, which recalls the "Maiden," the torture jacket of the Middle Ages, under which the contraction of the muscles renders certain in the future the maximum possible deformity owing to overriding of the fragments of the bone.

Every one of these authors, not excluding even those who hesitated, all come back to the formula which Malgaigne very frankly placed at the head of his great treatise on fractures:

"The treatment of fractures can be summed up in two great indications: Reduce the fracture and keep it reduced until consolidation is complete."

The nineteenth century saw the birth of a considerable number of works on fractures; all of them rely, above everything else, on physical or geometrical theories of the mechanism of fractures; if they discuss treatment at all, it is only to describe new means for the forcible reduction of fractures and their maintenance in position.

TREATMENT BY IRREMOVABLE APPLIANCES.

An enormous part in treatment of this kind has been played by a new invention—that of irremovable apparatus. This method of treatment is extremely valuable in certain cases, but the infatuation for these appliances has been such that in a very large number of cases they are the cause of the very worst evils that can be produced by immobilization. To realize the regrettable results of this absolute immobilization upon the nutrition of the limbs we must come down to our own times. The problem presented by the treatment of fractures, which used to be "reduce, and maintain relative immobility," has now become "reduce, and enforce absolute immobility of one or several segments of the limb without regard to the duration of the immobilization."

THE ORIGIN OF MODERN TREATMENT.

It was perhaps the very exaggeration of the evil produced by the abuse of this ingenious invention that

contributed to bring about an understanding of the necessity for a change in treatment. So far as I myself am concerned, it was the excess of the evil which, more than any other fact, particularly struck me. The excess of the evil opened my eyes to the inconveniences of immobility, and to the part which mobility ought to play in the repair of fractures. This observation it was which emboldened me to make mobilization a leading principle in the treatment of fractures. The success of the treatment has been due to the very numerous clinical observations which have demonstrated the truth of the principle.

But to bring about an abrupt change in treatment, and to replace a bad by a good line of treatment, it is not alone sufficient for observers to recognize the existence of the evil. Our art must advance by slow steps, and it is well to learn how a change which upsets all the oldest principles could be made, how it could even enter the mind of an observer, and how it could be adopted by the majority of surgeons accustomed to another practice, which, although it presents many disadvantages, yet has for centuries rendered services at once incontestable and uncontested. This progress in therapeutics must be brought into relation with the great scientific changes by which modern surgery has been created. The paradoxical idea of introducing movement as a part of the treatment of fractures, and its acceptance by the medical public, must in fact have owed its development and its success to some very strong reasons.

Before making known the results of my own observations and experience, I long meditated upon the facts, and I can assert that I only made up my mind to publish conclusions contrary to all received ideas, and to initiate a revolution in treatment, because I was witnessing and taking a part in the transformation which surgery was undergoing.

Pasteur and Lister had so completely upset all our earlier notions that their example forbade any hesitation in submitting the best established scientific and practical theories to severe criticism. They inspired me with the courage which alone could lead to useful discoveries, and transform what it is most difficult to transform—practices resting upon most ancient customs, such as are to be described by the word "routine."

My assertions as to the remote consequences of the discoveries of Lister may be considered exaggerated, yet I am profoundly convinced of this indirect influence of a great piece of scientific work, and more especially of a piece of work which brought about a radical transformation not only in scientific theory, but also in the mechanical execution of the details of the surgeon's own acts, a change which completely upset his habits in practice.

This extraordinary piece of work which upset all our habits and destroyed the whole edifice of our surgical education, produced in us such an aptitude for change that I also found it possible to accomplish another piece of destructive scientific work, which, while it has its own dangers, can alone lead to great transformations in science and in practice.

The relation of the change which I have advocated to our older education is in fact very singular. A distinguished American surgeon, Caldwell, of Freeport, who had assiduously followed my practice at the Beaujon Hospital, and had watched my treatment in the various types of fractures treated there, said in summing the matter up: "It is a very strange thing, after spending all one's life as a surgeon and following scrupulously the precepts of surgery, to realize that one has been steadily deceived, and that in a practical matter so well established as the treatment of fractures one has been doing evil where one believed that one was doing good."

Is not this the very same idea that Sir William Bennett has sought to express in the introduction to his *Lectures on the use of Massage and Early Passive Movements in Recent Fractures*[1]

> Indeed, it cannot but excite surprise in the mind of an intelligent person that the stiffness, pain, and other disadvantages which so constantly follow the treatment of fractures upon classical lines, should have been countenanced for so many years when they can, in the majority of cases, be entirely obviated by a treatment so simple as that described in the following lectures.

To break so completely with acquired habits, even when the change is the consequence of numerous positive observations, is in truth a revolution, and revolutions are only made when the reasons in their favour are many and strong. The transformation wrought in our scientific mentality, giving it a degree of boldness which might seem to be temerity, undoubtedly had a leading part in influencing my course.

But the advance of surgery is always complex, and it must not be forgotten that other considerations influenced my mind, leading me to study the fundamental influence of movement on the vitality and on the regeneration of organs damaged or destroyed by injury. It is no doubt true that these considerations also have no very direct bearing, but they are the consequence of the advance of science and of the contemporary progress of medicine and physiology. When the study of many of the empirical methods of massage and gymnastics was commenced in France, the study of movement was at the same time founded and developed. In this study two great French men of science were the chief leaders. Marey, by his methodical and in a certain sense mathematical study of all movements, taught us to register and reproduce them in pictures which were at once true and expressive; while Lagrange introduced medical analysis into the study of functional and gymnastic movements by applying the physical ideas of Marey to sport and training. It is, at any rate, the fact that my acquaintance with these two men of science contributed to lead me to study movement from the point of view of its physiological and pathological consequences in fractures and in injuries of the joints.

Since that time a considerable number of men of science, teachers of gymnastics, masseurs, and others, have carefully studied all the scientific facts bearing on the subject, and the present position of what is called physio-therapy is the result of a series of quite modern investigations.

The study of movements from the educational and therapeutic points of view seems to have originated in France during the last century. The aims of the gymnastic methods of Amoros and Laisné were at first educational, but their applications in my country long remained very restricted, whereas in England and in America the love of sport gave origin to important empirical ideas with regard to movement and to training. It was, however, in Sweden and Norway especially that the study of movement from the educational point of view and the development of the art of massage were given a truly scientific character, and was controlled by men of science and doctors, while in every other country it remained the property of empirics.

We must, in fact, not fail to recognize that the share of Sweden and Norway in the evolution of massage and gymnastics has been scientific. It must not be supposed that the fundamental difference between the system of gymnastics known as Swedish and other systems lies in any actual difference in the movements. The merit of the Swedish system of gymnastics lies in the application of scientific rules and of a definite method. The cause of its success is to be found in this methodization. Various very different forms of movement are capable of giving equally successful results if they are measured and if they are performed on a regulated system. Again, it is the method or system which has rendered it possible to use this therapeutic procedure in many very different forms of education and treatment.

Treatment by Massage and Early Movement.

With regard to the treatment of fractures which I advocate, I will say this, that my success has been due, more than anything else, to the introduction of a strict method of applying special forms of movement to the treatment of fractures. It is the method which has rendered possible the generalization of this therapeutic measure and its application to all forms of injury of the skeleton and of the articulations.

It is not unprofitable thus to recall the spirit of the method which served as a clue to guide me in working out a therapeutic revolution, and it is in fact true that each successive step can be traced in the history of my various trials and investigations, and in the order in which my various applications of the method succeeded one another I began by lessening the degree of immobility; next I did away with it altogether; next I began to use movements at an early stage; then I began to use them immediately after the injury; finally, I made use of massage, that is to

say, of a method of mobilizing the muscles, the joints, and even the bony fragments. It was necessary to define the indications and the limits of this special form of movement. Thus it was that years of observation and experiment led me to establish the bold practice of methodical therapeutic mobilization.

It is a singular thing to realize that it was through my own detailed studies that I did this, and that, apart from my personal researches, nothing was published before the appearance of the description of my method. The only instance in which massage had been used for a fracture at about the time at which I developed a complete method was for fracture of the patella; it was so used by Metzger, who apologized for applying massage to a fracture, on the ground, as he said, that in this particular fracture bony union could not be obtained. The same masseur, in discussing sprains of the ankle, stated specifically that massage should not be used if the malleolus was fractured.

At the very same period I showed, in opposition to this, that massage favoured the production of new bone, and later on the beautiful experiments of Cornil on animals proved that this result of the mobilization of the fragments was invariably to be observed, and in young animals was too great.

Having carefully studied all earlier observations which might have served as precedents for my method of mobilization and massage, I have satisfied myself that none such existed.

SUTURE OF BONES.

Since my method was devised and generalized two important means for the study and the treatment of fractures have seen the light of day; these are suture of bones and radiography.

I do not wish to decry immediate suture of fractured bones. When Sir Hector Cameron performed the first suture of the patella, when Lord Lister published his articles on the subject, I was the first to follow their example. I believe, indeed, that I am to this day the surgeon who has performed the operation of suture of the patella in a greater number of cases than any other in the world. I believe also that there are few surgeons more familiar than I with the suture of bones in general. I consider that most valuable results can be obtained from immediate suture performed antiseptically.

But the question is, Does the suture of bones used as a general method for treating fractures in the way recommended by Arbuthnot Lane in England, Lambotte of Antwerp, Tuffier of Paris, and many other surgeons, deserve to be generalized and preferred to every other method? Without denying its conspicuous advantages, I must say that for my part I do not think so. I believe that it is a sort of continuation of the old method of reduction and fixation of the fragments. It would seem, indeed, to be the ideal of reduction followed by immobilization, and has in fact been held to be the most perfect realization of the old precept as to the treatment of fractures. It is certain also that the more the method of mobilization is developed the fewer will be the occasions on which immediate suture will be performed. If, as I have shown, a small amount of movement assists the process of repair at the site of fracture, it is quite evident that suture cannot be the ideal mode of treatment, for it ought, if properly performed, to do away with all movement of the fragments. I can at once give a practical example of this; suture of the olecranon is undoubtedly the simplest of all operations of the kind. I have done it for old fractures inadequately treated by other surgeons. I have never had occasion to do it for recent fractures properly treated by my method, because perfect recovery is obtained within a fortnight without operation.

RADIOGRAPHY.

Since I began the treatment of fractures by movement, light has been thrown on the study and the treatment of fractures from another new and important source; this is the application of radiography to the examination and to the treatment of fractures.

Although I am the author of an essay on the errors of radiography, I appreciate the importance of radiography in regard to fractures; but I hold that on the one hand radiography cannot dispense us from the study of the symptoms of fractures, and on the other that it cannot warrant an untrained person replacing a doctor in making a diagnosis and in treating fractures.

Radiography gives us only a picture of the projection of a bone, and is subject, therefore, to many more drawbacks than ordinary photography by reflection. Consequently it is necessary very critically to examine images which for a multitude of reasons may give misleading pictures of the site of the fracture. It is necessary to learn how to appreciate the real value of a radiogram; only after much experience can one become a good judge of radiograms of fractures, even when these radiograms have been well taken. A radiogram which is badly taken may give rise to a multitude of errors of representation which ought to be known, and which produce many mistaken ideas in the mind of the non-medical public.

Subject to these two reservations, radiography is a marvellous aid in the diagnosis and in the treatment of fractures. From this time forth the surgeon ought never to fail to use it whenever it is possible to do so. Nevertheless the value of the help it can give varies very much. In the immense majority of cases there is very little chance that abstention from resort to radiography will prevent us from arriving at a correct diagnosis and the institution of proper treatment; it is essentially necessary in rare cases only. In the majority of instances it is only an additional security, giving a useful assurance to us, and to the friends of the injured person an interesting demonstration, and a document for future use.

Radiography has afforded me very special help in all that concerns my own standpoint with regard to the treatment of fractures. I have long maintained that surgeons who supposed that in reducing fractures they adjusted the bony fragments end to end and restored them to their normal position were deceiving themselves, and that in spite of faulty position, in spite of a certain degree of persistent overriding, the function of the limb again became perfect. The object which we must have in view in treatment, then, must not be this ideal juxtaposition.

Radiography has, in fact, surprised surgeons very much by showing them fractures well and soundly cured, with excellent functional results, but with considerable bony displacement. Very often, indeed, surgeons not fully acquainted with these matters, and still more patients, on examining such radiograms have been led to believe that errors have been made, even when the function of the limb is as perfect as the nature of the injury renders possible. What we are thus taught will prove very valuable in establishing a modern treatment of fractures.

THE MODERN METHOD.

After this very short summary of the history of the treatment of fractures down to the present day, let me next explain my conception of what this treatment by movement is, and state the new facts observed by me which give a revolutionary character to my method.

A certain amount of movement between the fragments ensures the best bony repair; this is the corner-stone on which my method is based. Every movement which is not injurious by reason of its amplitude favours repair; but it must be understood that the movement must be measured—dosed, so to say.

The movement which is necessary for the repair of the bones is not less necessary to the vitality of all the constituent parts of the limb, and particularly for all the organs of motion—joints, muscles, ligaments, and tendons.

The relation which the movements have to pain experienced by the patient are not such as is commonly believed; certain kinds of movement help to relieve the pain. Immobilization, which seems to relieve, only gives momentary relief, for it prepares the way for other pains in the future. Mobilization, gently performed as early as possible after the injury to the bones, is the method which best promotes disappearance of the pain.

Massage affords the best form of movement. By simple mobilization, by massage, and even by his own examination, the surgeon ought never to cause pain, for the pain so caused leads to fresh pain and produces complications.

The reduction of a fracture is only a relative necessity; it should be resorted to only in certain deformations of the axis of the bone which are incompatible with the function of the limb—lower third of the leg, shaft of the humerus. In a large number of cases the manœuvre of reduction is useless; it is useless in all fractures of the radius with

impaction and moderate deformity, in most fractures of the upper extremity of the humerus, and in the great majority of fractures of the neck of the femur. In all fractures in which the displacement is due to muscular contraction any attempt at reduction is useless, as in fracture of the clavicle, of the olecranon, and many fractures of the malleoli. After massage the fracture is either spontaneously reduced, as in the case of the olecranon, or is very easy to maintain reduced, as in the case of the clavicle and malleolus. Those conditions which favour the vitality of the limb are all more important than those which produce immobilization of the fragments. The fact that shortening has not the injurious influence on repair which it is said to have should not be lost sight of when considering displacement. A moderate degree of shortening which does not change the static position of a limb is favourable to repair. The muscles surrounding a shortened lever act more rapidly and better than upon a lever on which they are stretched. A certain amount of shortening ought not to be interfered with, as it is favourable to the repair of a broken bone.

Massage has so great an effect in stimulating bony secretion at the site of fracture that in children, in whom the activity of the production of bone is great, massage ought not to be applied, save with great moderation, for fear of provoking excessive osseous secretion—in fact, a tumour. In their case simple mobilization is often sufficient.

Mobilization from the beginning, within the first twenty-four or forty-eight hours, is of capital importance, and at this stage movements of very small amplitude are sufficient; passive or induced movements are the best at the beginning. Active or spontaneous movements ought to be measured and directed by the surgeon; to allow the patient to follow his own fancy with regard to active movements is dangerous—all the more dangerous because with my method the pain caused by movement disappears from the beginning, and therefore does not limit the untimely action of voluntary movement. The pain experienced and the degree of sensitiveness of the callus are the best guides in directing and in permitting movement by the patient.

The secondary treatment of fractures and their supervision ought to be prolonged. Functional use of a fractured limb is the condition most favourable to its regaining active power. Even during this secondary period everything likely to irritate the region of the callus ought to be avoided. It is useless to cause pain by movements exaggerated in amplitude or by resort to forcible manipulation.

While before my investigations the surgeon contented himself, after having reduced a fracture, by awaiting cure, the modern surgeon should play a much more active, much more personal, and much less simple part. He ought not only to diagnose the fracture but ought to make its exact nature visible by a radiographic picture, and then take action to obtain not only solidity of the limb, but also to restore its suppleness, its regularity of action, and its power. He must not merely await the solidification of the skeleton. Moreover, his treatment must vary a great deal according to

The age,
The sex,
The variety in the site of the fracture,
The kind of fracture of the limb,
The general or local health of the patient,
His occupation,

and according also to the circumstances under which he is called upon to act, for if he cannot ensure proper personal supervision of mobilization, massage, and the supervision of the movements, it may happen that he will be compelled to replace an excellent method of mobilization by a moderately good method of suture, or absolute immobilization.

The surgeon needs a great deal of experience to conduct the treatment of a fracture in the best way, and I cannot help asking with some anxiety how a non-medical tribunal is to form a judgement on questions so complex, should the patient and his medical attendants cease to be in accord.

The situation is complicated. Well-to-do people bring actions against surgeons because they continue to experience pain or stiffness after a fracture; workmen reproach the surgeon because he cures them too well, inasmuch as by causing the disappearance of all secondary pain, accidents are not followed by the permanent infirmity for which they hoped.

The whole history of the surgery of fractures cannot be related in an address which is already too long, but I shall have succeeded in my purpose if I have made plain to you to how great an extent the duty of the surgeon has become, difficult indeed, but effective in this matter of fractures. Instead of waiting for the injured person to cure himself, we can cure him and quickly restore to him the use of his limb.

It is a laborious task, more difficult than the banal application of irremovable appliances; it is still insufficiently understood by the profession, and altogether unknown to the public. But I am proud to think that in your country it has met so favourable a reception that you have been willing to listen to the exposition of the subject which I have to-day offered to you as a tribute of fraternal homage.

An Address
ON THE
PRODROMAS OF MIGRAINE.

Delivered before the Westminster Division of the British Medical Association.

BY
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Gentlemen,—I have chosen a subject for your consideration with which every practitioner is familiar from the accounts of his patients, and a good many are also well acquainted from personal suffering—the curious sensory symptoms that constitute the premonition of attacks of migraine, using the term as equivalent to paroxysmal headache. The symptoms occur before every form of such headaches, those which are bilateral, as well as those that may be strictly termed "hemicrania," but both are common without premonition.

The knowledge we have of these peculiar symptoms, the prodromas of migraine, is very small, compared with their frequency, their detailed features, and the facility which frequent recurrence affords for their collection. It is easy to explain the paucity of facts. Observation under conditions of distress is not easy, especially when minute precision is needed. A graphic presentation of visual sensations, such as that which was afforded by Dr. Airey, can only be recorded from memory, because vision is too much interfered with by the subjective disturbance at the time. A knowledge of, or at least some acquaintance with, the physiology of sensation is necessary for the full use of the opportunities which are met with, especially by personal observation. It is the hope that I may excite some to careful record, that makes me choose this subject for consideration, and describe some cases which illustrate the leading features of these strange manifestations. I will, however, endeavour to avoid repeating those that I have given in the Bowman Lecture on Subjective Sensations of Sound, and in the lecture on migraine in *The Borderland of Epilepsy*. I do not propose to discuss their nature, although it is difficult to avoid alluding to the hypotheses that have been brought forward.

The prodromas are a functional disturbance in the sensory region, and so is the headache which succeeds. But the headache may be termed a coarse disturbance consisting of pain, often most intense, and sometimes with some secondary effects of its severity. On the other hand, it may be slight and of short duration, and it may be even absent, the prodroma occurring alone. These premonitory symptoms, although sensory, do not include pain. They are restricted in range. The sense of sight is often involved, sometimes by loss, partial or general, sometimes by an elaborate display of its higher crude functions in light, colour and apparent motion. Other special senses do not participate, except the sense of touch. Neither smell, taste, nor hearing seems to be involved, although there is rarely a slight degree of vertigo, the precise nature of which is not clear. The involvement of cutaneous sensibility seems to be of touch, and is a frequent and

marked manifestation. The arm is its most common seat. It may be felt in the tips of the fingers, passing along them, and going no further, or as a zone of tingling around the wrist, which slowly ascends the arm, in the course of ten to fifteen minutes. As it passes up, it leaves behind it lessened sensibility, which gradually becomes normal, and with this some degree of loss of power, apparently the result of inhibition. After reaching the shoulder, the tingling hardly ever descends the trunk to the leg, although it may in rare cases be felt in the foot, and sometimes ascends the leg. Often, after ascending the arm, or primarily, it is felt at the month, in the lips, sometimes in the gums and tongue, on one side, but in the lips it is often felt on both sides. Here it is an intense tingling, sometimes compared to pins and needles, apparently as slight pricking, but it is never described as pain. It seems here also to leave distinct diminution of sensibility behind it, but on this we much need further observations, on the degree and duration and character of impairment.

Still more frequently the premonition consists in interference with sight. There may be impairment of one half of the field of vision, seldom, if ever, so complete as it is from organic disease, not reaching actually the middle line. Often the loss on one side is associated with a luminous spectrum, of which a typical form is that figured by Dr. Airey in the *Philosophical Transactions*. This begins as a star, a little to one side of the fixing point, which enlarges, becoming first an angled sphere and then a serrated or zigzag outline which breaks below, and the elements of which it consists become progressively smaller towards the free extremity. They are often coloured, adjacent ones differing. Sometimes they are luminous without colour. Often they are double. Within the zigzag, as it expands, there is a misty luminosity which becomes fainter internally, and hinders sight if an object is looked at. Thus the dimness of vision within the bright or coloured zigzag outline resembles the numbness left by the tingling as it passes up the arm. After its expansion, the spectrum often ends by a whirling explosive appearance. In other cases an angled light appears near one lateral edge of the field, or both, sometimes several interlacing zigzags. Or a stellate bright object may appear on one side and remain, without expanding. In other cases a sort of luminous lacework occupies the middle of the field, sometimes bounded by a brighter band. Various other spectra are seen, of which we much need precise drawings.

This sensory disturbance may be always the same in some patients, in others varying. The premonition is often unilateral in character, and the succeeding headache is felt on the opposite side of the head. Sometimes the premonition is felt on both sides or has no lateral significance, and then it is succeeded by a medial or bilateral headache. These constitute the common rule, but exceptions are frequent; at least, a patient may fail to recognize a one-sided seat of the headache which succeeds a unilateral prodroma. The headache may be successively bilateral, that on one side ceasing when pain develops on the other side. Moreover, the premonition when unilateral may pass beyond the middle line in its course, although the headache is confined to one side.

One other frequent symptom of the warning remains to be mentioned. When the sensory disturbance is right-sided it is often accompanied by impairment of speech of the character of aphasia. Sometimes the loss is almost complete; in other cases there is only a difficulty in the use of words. But we need much to know more precise details of this loss when it occurs.

Of the process which induces the premonition we have only hypothesis to rest on. There is clearly a disturbance of function in certain parts of the cerebral hemisphere, probably the cortex, which is the subsequent seat of the pain. The disturbance of function is apparently crude, and seems, as it were, to ripple through the centre, leaving an inhibited condition which quickly passes away.

Any hypothesis presents difficulties. That which is least difficult is the opinion that local vasomotor spasm causes anaemia in a certain region, and that subsequent dilatation of the arteries is the cause of the subsequent pain. There is often superficial pallor and coldness during both the sensory premonition and the early part of the headache, but it is not always conspicuous, and the state of the surface is only evidence of the occurrence of vasomotor derangement, and not of its kind. A greater difficulty is constituted by the uniform character of the nervous symptoms in most cases, and the difficulty in assuming that such a nervous discharge can be explained by such a process as vasomotor spasm. But the production of an effect may be facilitated by repetition. Some time after a previous headache an attack may be brought on by over-fatigue or by error in diet, which would have no effect soon after one. This has given rise to the assumption that some toxic state is developed in the system. It is, I think, certain that the sufferers often have a pronounced gouty inheritance. But the assumption of a peculiar blood state throws no light on the immediate mechanism of the attacks, and is quite compatible with the theory of vasomotor disturbance. Certainly marked benefit is often obtained from the regular administration of nitroglycerine (with strychnine), which seems to act by steadying the vasomotor nerves and rendering them less prone to derangement. I have never had an opportunity of observing the retinal vessels during a sensory prodroma, but during the headache I have seen no abnormality in size, and the known symptoms during vasomotor spasm of the retinal artery bear no resemblance to those which precede migraine.

The time of life at which migraine begins varies much. Often the headaches are said to go back to the period of earliest memory; they may begin only when adult age is reached, or a prodroma is added to those which before occurred without one. They may commence at any later period, and often as late as fifty or after. At any adult age, the prodroma may occur alone, at least sometimes, the headache being or becoming slight and trifling. When a visual spectrum has often preceded the headache, it is sometimes called into separate existence without succeeding headache by any flickering light before the eyes, such as a reflection from rippling water. A surgeon, who had suffered from migraine for many years, sometimes set up his customary spectrum by the reflection from the knife with which he was operating. Thus the functional disturbance is apparently the same as is produced by actual vision.

In middle or later life the occurrence of an unaccustomed premonition may give rise to much concern, especially if it involves the arm, lips, or speech. It may seem like a vascular lesion in the brain, especially if it occurs without succeeding headache, or if this is only slight. Even a more severe degree of pain in the opposite side of the brain may seem the effect of a presumed cerebral lesion, to the medical practitioner as well as to the patient, who is likely to consult his adviser in alarm on account of symptoms which are new in his experience. I have known this to occur, and an erroneous diagnosis to be made without any other foundation. The symptoms which alarm the patient closely correspond to the premigrainous premonition in detailed character, and this should therefore be familiar, for the correspondence may always be trusted. I will indicate the points on which reliance may be placed in describing some cases to illustrate the general facts I have mentioned, as I now propose to do. Especial weight may be placed on the deliberate progress of the symptoms, such as the sensation of numbness ascending the arm, and on the definite numbness in the lips and its extension to both sides of the lips, and on the brief defect of sensation which follows it, and on the affection of vision, and the definite but transient interference with speech. This is always associated with right-sided symptoms in vision or the arm or face. The constant vanishing of the symptoms in the order in which they come on is also of great significance.

A young man of 17 had suffered from migraine since 12, the intervals ranging from a week to several months. Coloured zigzags appear on the right side of the field, and he cannot see on the right side. The spectrum expands and passes to the left, together with the impairment, which thus involves at last the whole field. After it has passed away, speech is almost lost; for half an hour he is only able to utter a single word of four or five he wants to say. When this ceases the headache begins at the back of the left eye, passing to the left side of the head, for six hours or so, it persists throughout behind the eye. There was no sickness, but great general sense of cold, and a very small pulse.

A man of 37, who had had rheumatic fever in early life, had suffered from left-sided headaches for a year, about once a month. They began sometimes soon after waking in the morning, more often at any time in the day. First there is

numbness in the tips of the fingers of the right hand, which passes slowly up the arm and then is felt in the right side of the cheek and mouth, but does not go to the throat. He is then unable to utter words correctly; there is not difficulty in getting the right word, but a difficulty in uttering it, apparently in articulation. Then this and the numbness cease, and headache comes on in the left frontal region, or left side of the occiput. On nitroglycerine the attacks ceased for nearly a year, and they returned less frequently and in very slight degree, but with the same premonition, and he had occasionally, during sleep, a right-sided convulsion, apparently of idiopathic epilepsy. There was no optic neuritis or sign of organic disease.

A member of our own profession, aged 37, whose mother also suffered from migraine, had had attacks as long as he could remember. The headaches had been preceded by visual symptoms, which occurred alone once or twice a week when he was seen, without succeeding headache. The condition begins as a luminous zigzag near the periphery on one side; it becomes larger, without colour, and inside it is a yellowish luminosity. Then it seems to him to cross to the other side, but there is no definite hemianopia. The side varies on which it appears, but the headache he had previously was always on the side opposite to that on which the spectrum began, and was accompanied by a small spot of hyperaesthesia on the occipital scalp. Formerly, when the premonition was on the right side and the headache on the left, aphasia formed part of it, and the first symptom was numbness in the hand, beginning in the hypothenar region and passing along the tips of the fingers to the thumb, which passed off in the same order, and never ascended the arm.

When a prodroma in the arm is associated with disturbance of vision the former usually occurs first. But it occurred last in one patient:

A lad of 18 suffered from headaches, which came on at intervals of six weeks or longer, sometimes six months, and then two or three headaches occurred at much shorter intervals. First there is an appearance of zigzag shaped objects before the eyes, not coloured, extending over the fields, but intermittently, and anything at which he is looking disappears and then can be seen, again to vanish. This is repeated several times, and is followed by slight dimness of vision to one side. Then numbness occurs in one hand or the other, sometimes in the shoulder, and then it passes down the side and the leg. Sometimes it passes up to the face and involves the tongue and throat, like pins and needles, on one side only, but the side varies in different attacks. It is slow in progress, taking half an hour to go through the side, and seems to recur in waves in its course, as did the affection of sight. Sensation in the skin seems dimmed by it, but is not lost. When it is over headache comes on, severe, usually on the side of the head opposite to that on which the prodroma was felt, rarely on the same side, lasting from one to several hours, and attended by vomiting. I could not learn the character of the premonition of the same-sided headache.

In almost every case which is carefully studied the prodroma presents some special peculiarity, and a number of precise records must be collected and compared, to furnish the ground for any inference regarding their features. Momentary symptoms are usually characteristic of the warning of epilepsy, but in one case of migraine the prodroma was a bright spot of light, with a blue margin, which lasted only for a moment, but returned three or four times in the course of an hour, when severe pain came on, on one side of the head. The patient was a woman, 35 years of age, who had suffered thus for many years. Her mother also had migraine.

I have said that in bilateral or medial headaches, if there is a prodroma, it is of similar distribution. Thus a man, whose attacks of pain were severe and were situated in the middle line of the head, experienced a premonition which consisted in a concentric contraction of the field of vision, which became restricted to a small spot in the middle of the normal field. Before this he sometimes had tingling in both hands. In another case there is first general dimness of sight and after it has lasted a quarter of an hour, bright luminous spots appear at each outer side of the conjoined field of vision, and are seen in rapid movement. They do not extend far into the field, and one or two are larger than the others. When they disappear, headache comes on across the forehead and behind both eyes. It lasts only an hour, but he feels tired for the rest of the day.

Migraine and epilepsy occasionally coexist in the same patient, as in the second case mentioned above; but generally whichever disease existed first presents a diminution after the second has developed. That this is the rule cannot be doubted if a large number of cases are compared. I pointed this out in the *Borderland of Epilepsy*, and mentioned some examples. The two affections seem, however, essentially independent. I have only once or twice met with a true connexion between them, the visual premonition of migraine becoming quickened into the aura of the epileptic fits. But such a relation is extremely rare. As a rule, the prodroma is always most deliberate, and is never attended by motor spasm, or, indeed, any motor symptoms, except the slight weakness when the numbness has just passed. Very rarely some spasm may be met with in association with the subsequent headache, when it is very intense. In a clergyman of 47, whose headaches began at 20, the early symptoms were unusual, inasmuch as right hemianopic dimness of sight, for a quarter of an hour, was followed by right-sided headache, chiefly at a spot in the right side of the occiput. The pain also passed down the spine to both legs and caused a twitching backwards, apparently semi-convulsive. The pain reached its height in six hours. There was no change in consciousness. The motor spasm was clearly a secondary effect of the pain. It had given rise to the diagnosis of epilepsy, and also of hystero-epilepsy, to neither of which it had any relation.

In another case, a woman with very severe headaches of long duration—two days—which were attended during their height by semiconsciousness, and sometimes by spasm on the left side when the headache had reached its intensity, on one occasion the spasm made her fall out of bed. The prodroma was also long, lasting two hours, and consisted of coloured zigzags, which sometimes occurred alone.

That which is presented to the patient in the sensory premonition is a release of function, the form of which is thereby shown, and also its character. It is this which gives importance to the precise details. Most of the unilateral premonitions may be explained by the limitation of the disturbance to one hemisphere, by whatever it is excited, arterial spasm or whatever may be productive of the activity of function. But in rare cases the visual loss has the form of transverse hemianopia, loss of the upper or lower half of the combined field. In the hinder part of each hemisphere is represented the lateral half of the field, as a combination of the upper and lower quadrants. But the transverse loss implies an affection of the two upper or two lower lateral quadrants, situated in different hemispheres. This may be effected by arterial spasm involving symmetrical branches in the two hemispheres, on the supposition that arterial spasm excites the initial disturbance; or it is conceivable that this spasm may be on one side only, and the functional inhibition induced may act secondarily on the related centre in the other hemisphere.

I have elsewhere mentioned some examples of transverse hemianopia, loss of the upper half.[1] It was also described by a woman, aged 38, as a prodroma of headaches from which she had suffered for twenty years. The first symptom was loss of the lower half of the combined field, observed with each eye. Often, but not always, luminous zigzags were seen in the dim region, bright but without colour. During recent years this had been followed by other symptoms, numbness and tingling in the upper lip or in one thumb, and on one occasion a patch was felt on the back of the left foot. Sometimes it was felt on the right side of the nose and adjacent cheek, with marked diminution of sensibility. When on the thumb it may remain there or may ascend the forearm as far as the elbow. Wherever it is felt, it lasts for ten or fifteen minutes, and then the headache begins, usually at the back of the head, and comes forward.

In another patient, a woman of 41, the hemianopia was sometimes lateral and sometimes transverse; the lateral loss did not extend to the middle line of the field, but the transverse loss reached the horizontal mid-level. If she looked at the middle of a clock dial, everything below the middle was indistinct. There was also numbness in the arm, slowly ascending and going to the lips and mouth on that side. When this was on the right side, loss of speech occurred also before the headache.

In young children sudden symptoms are sometimes seen, with headache, pyrexia, and general aspect of illness, often with vomiting. The symptoms cause a fear of acute meningitis, but after one or two days they rapidly pass away. For example, a boy, aged 9, had suffered since the age of 6 from two or three such attacks about every

six months. Each began with frontal headache for an hour; then extreme sleepiness came on, with vomiting at intervals. The temperature rose to 101° or 102°; the tongue was much furred but after thirty-six or forty-eight hours all the symptoms passed away. There was a strong double family history of gout. The attacks generally seemed to be excited by some indiscretion in diet. I doubt not you will remember such cases, which come chiefly under the notice of the practitioner rather than of the physician, and I should like to know whether you have not observed that they gradually acquire, as years go on, the characteristic features of true migraine.

At the other end of life the prodroma of migraine frequently occurs without, or with but slight, headache, and sometimes with more brief headache than occurs during middle life. Occasionally the loss of power seems to be the chief symptom, and in these cases the headache is generally so slight as not to attract special attention. With many patients an error in diagnosis readily occurs in a first attack of this character, although another one is less likely to be mistaken. The weakness may be considerable. In one patient the attack came on when on a journey, and for an hour he walked with great difficulty. If we assume that vasomotor spasm is the cause of the prodroma, we may regard arterial spasm in the motor region as a sufficient cause of the loss of power.

The same conclusion was reached by Dr. Langwill of Leith regarding two cases of this character in late life, in which symptoms quite like those of a grave organic lesion passed away after an hour's duration. Each patient had other similar attacks.[2]

Recovery may not always occur, even if the vasomotor hypothesis is correct. The arterial contraction prevents sufficient blood reaching the region of the brain to maintain its function. When the blood state favours rapid thrombosis this may occur in the vessel so as to preclude the return of the circulation, and enduring thrombosis, with all its consequences, may maintain the loss of function as permanent hemiplegia. Indeed, there is some danger of this in earlier life if any change in the blood promotes its coagulation. A woman of 29 had been subject to migraine as long as she could remember, always on the right side of the head. During the fourth month of her second pregnancy an attack of her customary pain was followed by left-sided weakness, with ataxy of the hand, permanent left hemianopia, and impairment of sensibility on the left side. Pregnancy often involves an increased proneness to blood coagulation; there was no heart disease or albuminuria.

Migraine abounds in problems of interest, but I have striven to confine your attention to the points on which additional and extended facts are much needed. A consideration of the cases I have mentioned will show how numerous and various are these features in every case.

If these are not at first evident to you, I shall be only too glad to have an opportunity of pointing out the details on which any case may add to our knowledge, on information as to the general character of the premonition. The task is not easy, for the prodroma is brief and ever changing, and observation needs the perception of another person; but it is worth an effort and will reward the trouble it occasions.

I may add another word regarding treatment. The benefit from nitroglycerine and strychnine, although often most conspicuous, is not invariable. Cases in which vasomotor disturbance is well marked externally sometimes derive no benefit. Why this should be the case it is not possible to say. Bromide taken regularly may then have more effect, or a small, long-continued course of salicylate. For the relief of attacks which are developing, a dose of antipyrin has often a quick influence, or Hochst's fused combination of antipyrin and caffein (migrainin), or a similar preparation made by Martindale of antipyrin fused with salicylate of caffein (migralgin). Nitroglycerine may conveniently be given in the form of the 1 per cent. solution, liq. trinitrini, but the mixture containing it must be kept acid. It may therefore be usefully united with a digestive tonic. Dyspepsia is common in some of those who suffer from migraine, and an error in diet may give rise to an attack some time after the previous one.

REFERENCES.

[1] *Borderland of Epilepsy*, pp. 59, 84, 97. [2] *Scottish Medical and Surgical Journal*, June, 1906.

An Address

ON

THE DIAGNOSIS OF SYPHILITIC DISEASES OF THE NERVOUS SYSTEM.

DELIVERED AT THE CLINICAL AND PATHOLOGICAL SECTION OF THE BIRMINGHAM BRANCH OF THE BRITISH MEDICAL ASSOCIATION, ON FRIDAY, APRIL 30TH, 1909.

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ALTHOUGH syphilis is directly or indirectly responsible for a large number of organic diseases of the nervous system and it is a useful practice based upon the results of experience to treat a large number of cases of disease of the nervous system by antisyphilitic remedies, yet it is well to bear in mind that in such a widespread disease as syphilis, *coincidence* as well as *cause* is of very frequent occurrence. Therefore, in making a diagnosis we have to determine the question whether the fact that the patient has had syphilis, or even presents at the time of examination signs of active syphilitic lesions, is a coincidence or bears a direct or indirect causal relationship to the nervous symptoms for which he is consulting you. In many cases, especially in women, there may be no history of syphilitic infection and no signs on the body, and yet the character of the disease may clearly point to the possibility or even the certainty that it is of syphilitic origin; or it may happen that without a history or signs of syphilis a nervous affection may arise in an individual, which after antisyphilitic treatment ends by cure, arrest, or amelioration, but it does not necessarily follow that the disease was syphilitic, for we do not know what would have happened in the way of improvement if no drugs had been administered; in fact we cannot be sure whether it was an example of *coincidence* or *cause*.

A person suffering with an affection of the nervous system, whose blood gives a positive antigen reaction, is much more likely to be suffering from a syphilitic affection than one who has had syphilis but whose blood does not yield the reaction; for it is an indication that the syphilitic virus is still active, and therefore capable of producing true syphilitic lesions of the nervous system. An examination of the cerebro-spinal fluid in such a case will afford most valuable evidence not only as to whether the disease of the nervous system is post-syphilitic or not, but whether it is one of true syphilitic inflammation or of a degenerative parasyphilitic nature. Such evidence is of vital importance, for, in the case of the former, mercury, rapidly but judiciously administered, may be followed by a complete cure, whereas in the latter it will do more harm than good. I will cite a case that was recently under my care.

A woman, aged 34, was admitted to Charing Cross Hospital said to be suffering from tabes. She had shooting pains in the legs, unsteadiness in gait and station, a feeling of the soles as if walking on cork, unequal pupils which reacted sluggishly to light and to accommodation, pain and cramp in the muscles of the legs, absent knee-jerks, patches of anaesthesia on the legs, and a belt of thoracic anaesthesia with girdle sensation. After inquiring into the history and finding that she had suffered with headache and squint, that the knee-jerks which were absent on admission had returned a few days later, I came to the conclusion that this woman, with a probable duration of infection of not more than four years, was suffering really from pseudo-tabes, the result of syphilitic meningitis, especially as she told me that she had had a little stiffness in the neck, and I then obtained Kernig's sign. Lumbar puncture was performed, and 390 lymphocytes per c.mm. were found—an enormous number for tabes dorsalis. This large number of lymphocytes could only be accounted for by a widespread active gummatous change in the meninges. She was placed on mercurial inunction. The symptoms began to clear up rapidly, and a fortnight later the lymphocytes had fallen to 70 per c.mm., and the fluid this time was tested by the Wassermann method, and found to give a negative reaction for both antigen and antibody. Unfortunately, blood was not tested on this or future occasions. A fortnight later the cerebro-spinal fluid was examined and only 20 lymphocytes per c.mm. found, the patient being almost well. A fortnight later still there were no lymphocytes, and the fluid was negative to the Wassermann reaction. The patient was quite well; the pains, anaesthesia, and unsteadiness had entirely disappeared.

It is of the greatest importance, therefore, to be able to decide whether a syphilitic patient is suffering from the immediate effects of the syphilitic virus on the enclosing, supporting, and vascular structures with secondary effects on the nervous structures, or from the remote effects of the syphilitic poison upon the bio-chemical stability, and therefore durability, of the nervous elements themselves. In the former case the nervous elements are secondarily irritated, damaged, or destroyed at random, although, for anatomical reasons, there are certain seats of election, the onset is more or less sudden, the symptoms are obtrusive and contrast markedly with parasyphilis, in which the onset is insidious, progressive, and of slow evolution. We shall see that examination of the blood and the cerebro-spinal fluid will often enable a decision to be arrived at as to which group of post-syphilitic affections the patient is suffering from. The sooner the nervous affection follows the primary infection the more likely it is to be syphilis of the nervous system; the longer the interval the more likely it is to be parasyphilis, but exceptions occur, especially to the former rule. It is much more common for tertiary syphilitic lesions of the nervous system to arise very long after the primary infection than for tabes dorsalis or general paralysis to occur within a few years of infection. There is no period from the appearance of the primary sore onwards to the end of life in which true syphilitic lesions of the nervous system may not occur.

The first point to decide is whether the nervous symptoms from which the patient is suffering are the direct result of the syphilitic virus upon the membranes, the blood vessels and their sheaths, with secondary degeneration of the nervous elements (for example, (1) Gummatous meningitis*—cerebral, cerebro-spinal, spinal; (2) localized gummata, single or multiple, obliterative arteritis) or are the symptoms those of tabes or general paralysis? It is not always easy to decide, but it is well to bear in mind that the shorter the period which has elapsed between the primary infection and the onset of the symptoms the more likely it is to be due to the action of the syphilitic virus; it is very unusual for a generalized syphilitic meningitis to commence after the lapse of five years from primary infection; quite one-half of the cases manifest symptoms within the first eighteen months, in some the symptoms are obvious with the appearance of the roseolar rash, and a few cases have occurred when the primary sore was yet unhealed. A very different order of things to tabes dorsalis and general paralysis, for in these diseases it is very rarely that symptoms occur in less than four years after infection, and the average time is ten years.

In the case of active syphilitic meningitis, arteritis, and gummata, all of which conditions may occur simultaneously, successively, or progressively over the whole cerebro-spinal axis, the blood will most probably give a positive antigen reaction, the cerebro-spinal fluid will exhibit a great increase of lymphocytes and albumen, but it may give neither antigen nor antibody reaction. The administration of mercury will cause the disappearance of the antigen serum reaction, the disappearance of the lymphocytes from the cerebro-spinal fluid, and the cure, amelioration, or arrest of the symptoms if the disease has not been allowed to progress so far as to lead to thrombosis of vessels and destructive ischaemic softening of the cerebro-spinal nervous substance. In the case of parasyphilis, especially general paralysis, there is a different reaction, the blood serum giving the antibody reaction; the cerebro-spinal fluid both in tabes and general paralysis exhibits lymphocytes and shows the presence of albumen.

CLINICAL DIAGNOSIS.

Neurasthenia.

A neurasthenic who has had syphilis, and who is suffering with irritability of temper, headache, insomnia, lassitude, loss of memory, who has occasionally difficulty in finding words to express his thoughts, complaining of migrainous or vertiginous attacks and of various cutaneous sensory disturbances, in the form of anaesthesia or paraesthesia, who is hypochondriacal and depressed, who has a mortal dread of softening of the brain, from which some friend of like habits and history has suffered, whose knee-jerks are exaggerated, and whose physiognomy exhibits a wearied, hypotonic, anxious condition, with lack-lustre eyes, will naturally arouse in the mind of the practitioner the possibility of the patient being in the prodromal stage of general paralysis. Examination of the pupils and of the cerebro-spinal fluid with negative results, in conjunction with the absence of any signs of dementia, will usually enable him to decide in favour of neurasthenia and to give a favourable prognosis.

Pseudo-General Paralysis.

Pseudo-general paralysis (diffuse syphilitic brain disease) is sometimes termed syphilitic general paralysis. I think that this is an unfortunate term to use, because general paralysis is of syphilitic origin and yet is incurable by antisyphilitic remedies. Diffuse syphilitic brain disease is not a primary neuronic decay, but a widespread chronic inflammatory process affecting the enclosing, supporting and nutrient structures, due directly to the action of the syphilitic virus; instead of occurring, as a rule, many years after infection, the most serious cases commence within the first four years after infection, therefore the average age incidence is some years below that of general paralysis.

The early diagnosis of *diffuse cerebral syphilis* is of the most vital importance, for it is amenable to antisyphilitic treatment, which if adopted in its early stages arrests or ameliorates, but occasionally a partial cure, or even a cure may be hoped for. It is, therefore, essential to know what are the diagnostic differences of general paralysis and diffuse cerebral syphilis. It is rarely that true general paralysis is associated with permanent coarse obtrusive paralyses; in fact the term "paresis" expresses the condition more truly. On the other hand, diffuse syphilitic brain disease is very liable to be followed by paralyses of all kinds.

Still, cases of universal syphilitic *endarteritis cerebri* accompanied sometimes by a gummatous meningitis and gummatous cerebral tumours for some time present no evidence of coarse paralyses, and not infrequently such cases are admitted to the asylums and are more often than not diagnosed as general paralytics; accordingly they are not treated with mercury. At the autopsy one recognizes a disease which is of a totally different pathological nature; the brain is not wasted, the convolutions are not shrunken, if anything they are rather flattened, as if there had been an excess of intracranial pressure. The patient was undoubtedly demented, and, although there were no signs of paralysis, he was weak, shaky, and tottery in gait. But was the mental condition like that of a typical paralytic dement? had he no physical signs or subjective symptoms during life which would point to his suffering from diffuse cerebral syphilis? These have been the questions I have many times asked myself when making autopsies on such cases. First of all many of these patients have signs of syphilitic skin lesions, often scars of gummata. The friends will tell you that they have for some time complained of severe headache, often worse at night. If accompanying the dementia they have had coarse paralyses, blindness or other obtrusive symptoms, coming on more or less suddenly, and with remissions and regressions, there is but little difficulty in diagnosis; but where the symptoms are mainly demential the diagnosis is not so easy, and necessitates a comparative knowledge of this form of dementia and the dementia characteristic of general paralysis. I now attempt to indicate the main points which will enable a differential diagnosis to be made. "The dementia of syphilitic brain disease is partial; it is unequal and elective in its attack; it compromises certain forms of psychic activity, memory, association of ideas, energy and capacity for mental work, rather than diminishing intelligence as a whole. It does not alter so profoundly the character and personality of the individual, nor in the great majority of cases does it destroy the patient's idea of his past and present state, nor that of orientation in time and space. He still possesses the *autocritical* faculty, and is more or less conscious and disturbed by his mental deficiency" (Dupré).† It is not necessary to inquire of others whether he has had lapses of consciousness or signs of torpor and apathy, or fits of depression, for he himself will usually tell you.

* According to my experience, based upon the results of a large number of *post-mortem* examinations, there is always associated periarteritis, endarteritis, periphlebitis, encephalitis, and myelitis; the neoplastic formation extends from without inwards along the perivascular lymph sheaths, and is never entirely limited to the membranes; it affects, more or less, the whole cerebro-spinal axis.

† Diagnose differentielle entre la Démence Paralytique et les autres formes des Démences acquises. Rapport iv, 1er Congrès Internationale de Psychiatrie, etc., Amsterdam, 1907.

From a clinical point of view syphilitic dementia is accompanied by numerous mental and bodily symptoms. The mental symptoms comprise states of excitement and depression more sudden and accentuated than general paralysis; there are disturbances of consciousness in the form of somnolent, drowsy, semi-comatose conditions from which the patients emerge, again to relapse, and such remissions are especially significant. In the intervals there is not the same intellectual and affective deficiencies as in general paresis, nor does the same approbativeness, moral optimism, suggestibility, mobility, and automatism obtain as in general paralysis. The accompanying bodily troubles are coarse and obtrusive, and due to focal disseminated lesions in the brain and spinal cord, causing apoplectic and epileptiform seizures, followed by aphasia, paraphasia, apraxias, hemiplegias, monoplegias, paraplegias, triplegias due to affection of cortical centres and their projection systems: or paralyses and sensory troubles from affection of cranial nerves and their nuclei of origin arise. The clinical picture may be slow in its evolution; it is irregular, variable, and proceeds by fits and starts, with prolonged and sometimes indefinite periods of arrest. It is often a stationary dementia, and under the influence of mercurial treatment it may undergo regression. True general paresis may occasionally—but rarely, according to my experience—supervene on such cases of regressive or arrested cerebral syphilis. The syphilitic dementia may in rare instances be accompanied by a tabes dorsalis, and we may think we have a case of tabo-paralysis, or there may be a pseudo-tabes associated with pseudo-general paralysis. When hereditary syphilis produces in a child or young adult a diffuse meningo-encephalitis, it may simulate general paralysis.

The best criterion lies in the mode of evolution of the dementia and paralysis. The evolution of general paralysis is slow, insidious, and progressive towards marasmus and death. Syphilitic dementia, especially if it be treated, remains stationary or tends to regression, ending in a state of acquired imbecility, of which the history affords the clue. In my experience dementia from congenital syphilis is much less frequently met with than juvenile general paralytic dementia.

Recent investigations have shown that tuberculosis may produce in children diffuse encephalic changes of a chronic inflammatory and hyperplastic nature, terminating in a diffuse nodular sclerosis of the brain. These lesions cause mental enfeeblement, imbecility, and idiocy.

Arterio-sclerosis.

Syphilis is probably the most important factor in the production of arterio-sclerosis, especially cerebral arterio-sclerosis. Consequently a patient who has had syphilis may present signs of general arterio-sclerosis in which the vessels of the body generally, and of the brain and kidneys in particular, may suffer. Toxic conditions of the blood may arise in consequence of the latter affection; owing to the renal inadequacy, and probably also the diseased conditions of the vessels of the brain, uraemic symptoms may arise in a person who is suffering with mental symptoms caused by the disease of the cerebral vessels and the altered conditions of the blood. The symptoms of uraemia—namely, headache, pyrexia, twitchings, epileptiform seizures—may simulate the symptoms and seizures of general paralysis. There are, however, points of difference which will enable a diagnosis to be made. In such a case examination of the heart and arteries and of the urine would afford information. The pupils in uraemia may have a sluggish reaction to light, but they are rarely unequal or irregular Very probably examination of the fundus will show retinitis, haemorrhages, and arterio-sclerosis of the retinal arteries, causing thickening of the walls, which appear like silver wires; consequently the veins as they pass over the thickened arteries often show a kink. The patient is usually over 50 years of age. The cerebral symptoms are often characterized by a progressive dementia and paralysis, but there are many points of difference, both in the mental and motor symptoms. From the psychological point of view, the dementia of cerebral arterio-sclerosis is a partial, unequal loss of mind. The patient becomes irritable, suspicious, and even dangerous to himself and others; there is exaggeration of emotivity, and various psychopathic reactions complicate the intellectual decadence; but, unlike general paralysis, the patient retains his notions of personality and the faculty of auto-criticism, and is therefore more or less conscious of his loss of memory and mental enfeeblement. From a clinical and evolutional point of view the dementia of arterio-sclerosis is associated with varied and innumerable paralytic symptoms appearing after seizures or in sudden attacks, and due to the capricious, random affection of the different arteries of the brain supplying different functional territories. The arteries may be so thickened as to interfere with a proper supply of blood to various areas of the brain, or they may become occluded by thrombosis, in which case disseminated areas or foci of inflammatory softening and necrosis may result. The symptoms naturally vary according to the seat and extent of the lesions. When the anterior cerebral is affected a seizure may occur, and, owing to the paracentral lobule being destroyed on one or both sides, a leg monoplegia or paraplegia may result accompanied by disturbance of spontaneous psychic activity and of memory; in affection of the middle cerebral, there results hemiplegia, aphasia, apraxia, paraphasia, word deafness, word blindness, and dysarthria; in the posterior cerebral, hemianopsy, psychical blindness, and disturbances of topographic orientation. If symmetrical areas are affected by arterial ischaemia, or the projection fibres proceeding from those areas in the internal capsule undergo necrotic softening, paralyses of a pseudo-bulbar nature — for example, dysarthrias and difficulty of swallowing, etc.—may occur. One fact obtains in all cases: it is a parallelism between the depth of the dementia and the extent and degree of destruction of the cerebral cortex. Besides, we may have other less serious bodily disturbances resulting from arterio-sclerosis of the cerebral vessels which might especially be thought to indicate general paralysis—namely, apoplectic attacks followed by hemiparesis, dysarthria, difficulty in swallowing, disorders of psycho-reflex activity of speech, of mimicry, forms of apraxia and asymboly combined more or less with pareto-spastic symptoms. The character of the physiognomy in the case of organic dementia differs from that of general paralysis by the predominance of mimic disturbance over intellectual deficiency. In the former disease the patient shows a marked emotivity, readily bursting into tears or laughter, and not infrequently there is facial asymmetry of spasmodic or paralytic origin. These cases of arterio-sclerosis producing progressive dementia, paresis, or paralysis and pseudo-bulbar speech troubles are sometimes erroneously diagnosed as general paralysis of the insane, especially when accompanied by seizures, mental excitement, or depression and delusions. I have, however, seen typical general paralysis accompanied by general arterio-sclerosis; but, as a rule, the cerebral arteries in general paralysis are not thickened, and examination of the fundus rarely shows any noteworthy changes unless it be a case of tabo-paralysis, when optic atrophy is very frequently discovered. In a number of cases which I have examined of arterio-sclerosis I have found multiple softenings in the internal capsule and basal ganglia caused by disease of the lenticulo-striate arteries. These lesions account for the emotivity, mimic disturbances, dysarthrias, and pseudo-bulbar affections.

Chronic Alcoholism.

Cases of chronic alcoholism in which there is a history or signs of syphilis frequently offer many difficulties in the matter of diagnosis. They do so for many reasons: first, because many paralytics in the early stages of the disease take to drink. The symptoms they present are largely due to the effects of the intoxicant, and they are certified and sent to the asylum, where the diagnosis of *mania a potu* is made. The true nature of such a case declares itself after the effects of the alcohol has had time to wear off. I once saw a man who upon admission saw black devils come and perch on his nose and fill his nostrils with stinking things. He had been drinking heavily. A week later, when the effects of the alcohol had passed off, he had a marked euphoria, and when asked whether he still saw black devils that came and perched on his nose he said that they were angels with wings of gold, and that they put sweet perfumes in his nostrils.

Hallucinations, especially of vision and of a terrifying nature, are common in alcoholism; they are not common in general paralysis uncomplicated by alcoholic intoxica-

tion. The dementia of alcoholism is characterized by the predominance of the moral affective defects over the intellectual, by a degradation of the ethical sense, deterioration of will, and the tendency to delusions of persecution, jealous suspicion, and violent motor reactions, rendering them dangerous to themselves and others. The psychic activity is confused rather than destroyed. There is deficiency rather than absence of memory.

Alcoholic Polyneuritic Psychosis (Korsakow's Disease).

The clinical picture of a severe case of the disease is not unlike that of general paralysis in its final stages. It is commoner in females than in males. The patient, prostrate, bedridden, and emaciated, with contracted limbs and suffering with bedsores, lies oblivious to her surroundings; roused to reply to questions, only incoherent responses are obtained. Such a condition may well be termed *pseudo-general paralysis*. Frequently a definite diagnosis cannot be made unless the case be watched; if this be done, occasionally at intervals the mind may appear to be relatively clear in Korsakow's disease. The definite signs and symptoms of polyneuritis may be present. When the symptoms of Korsakow's disease are confined to loss of memory and mental confusion the diagnosis is more difficult. Auto-criticism may still be present in a patient suffering with Korsakow's disease; consequently, when confronted by her mental shortcomings she betrays astonishment and even alarm in her facial expression. The general paralytic, having lost the faculty of *auto-criticism*, is self-satisfied, and the expression is one of foolish contentment or of apathetic indifference. Both diseases are characterized by *pseudo-reminiscence*; but in general paralysis there is fantastic fabulation, whereas in Korsakow's disease the content of the pseudo-reminiscence is more or less of a probable nature and usually related to some past experiences in the patient's life. For example, a woman suffering with alcoholic dementia, named Gloster, was certified as suffering from delusions of grandeur. "She said she was the Duchess of Gloster." After she had been in the asylum some time and the dementia was passing off, I questioned her in reference to the delusion in the certificate. She stated: "My husband was humpbacked; his name was Gloster, and his pals called him the Duke of Gloster. If he was the duke, surely I had a right to call myself the duchess." She admitted that it was foolish on her part to have done so. A very characteristic delusion of this disease is that there is a baby in the bed. In Korsakow's disease there is complete disorientation; the patient has no idea of time or place or of the identity of persons. In general paralysis, on the other hand, there is incomplete disorientation; the patient still recognizes familiar surroundings and persons with whom she is habitually brought in contact. The loss of memory and receptivity is transient or temporary, but it is more complete for the time being than in general paralysis; the *amnesia* of general paralysis may not be so marked at first, but it is progressive and continuous. The existence of the Argyll Robertson pupil and of irregular, unequal pupils as permanent phenomena would decidedly point to general paralysis rather than Korsakow's disease. The cerebro-spinal fluid in the case of Korsakow's disease would be negative as regards the antibody reaction and lymphocytosis; therefore in all doubtful cases lumbar puncture should be performed and the cerebro-spinal fluid examined.

Dementia Praecox.

The age, mode of onset, and evolution of this disease is unlike that of general paralysis, except in the juvenile form. In 80 per cent. of the cases of dementia praecox the mental symptoms occur before the age of 25. There is usually a strong hereditary history of insanity, and no history or signs of congenital syphilis. General paralysis is a disease which on an average does not commence until ten years after infection; therefore the most frequent period for general paralysis to occur is not adolescence, but the prime of life. Occasionally, however, I have seen young women admitted to the asylum with *dementia paralytica* in whom the mental affection commenced at a relatively early age. Inquiry into the history often shows that they were prostitutes or had come from a refuge home, or a history of congenital syphilis was either certain or probable. Dementia is not the earliest sign of this affection, but hallucinations and fragmentary delusions; the Argyll Robertson pupil is not present, the pupils are not unequal, and as a rule not irregular. If there is any doubt, the diagnosis can at once be settled by examination of the blood and cerebro-spinal fluid by the Noguchi and Wassermann methods, and by cyto-diagnosis of the cerebro-spinal fluid. Twenty successive cases of dementia praecox were examined by Drs. Harper Smith and Rae Gibson in the laboratory, and in every instance the result was negative.

Disseminated Sclerosis.

The typical insular sclerosis of young adults should not be mistaken either for general paralysis or multiple syphilitic brain disease, although cases of multiple focal patches of sclerosis, the result of syphilitic arteritis, thrombosis and ischaemic softening, in many respects resemble that form of insular sclerosis the cause of which is at present unknown. The difference in the clinical symptoms and the evolution of the disease to general paralysis in most cases suffice for a differential diagnosis; but if there be any doubt, examination of the cerebro-spinal fluid and blood with negative results will serve to exclude general paralysis. I have occasionally seen cases of multiple syphilitic focal lesions, the result of syphilitic arteritis, in comparatively young women, in whom there was scanning speech, increased deep reflexes, spastic limbs, Babinski's sign, and nystagmus. One case in particular I have in mind. At the autopsy I found an old syphilitic arteritis with a focal sclerosis in the pons; there was also degeneration of the ascending and descending long tracts of the cord. The patient showed no signs of syphilis on the body, but she may have had it, as she was unmarried, and yet had had a child. It is probable that such a case might have given the serum reaction, and possibly the cerebro-spinal fluid also would have yielded a positive result.

Cerebral Tumours.

Cases of cerebral tumour without motor or sensory troubles are not infrequently sent to asylums, and, according to my experience, they are as often as not called "general paralytics." Examination of the fundi in most cases would have revealed optic neuritis, a condition never found in general paralysis, although it may occur in syphilitic brain disease; but as a rule, according to my experience, syphilitic gummata and syphilitic meningitis do not produce the same degree of swelling of the disc that non-syphilitic tumours do; very much, however, depends upon the situation and the rapidity of growth of the tumour. Large slow-growing tumours of the frontal lobe occurring in men at the prime of life and with a history of syphilis and drink may be especially difficult to differentiate from the slow demential form of general paralysis; especially is this so when the tumour destroys the left frontal lobe and irritates the adjacent motor cortex, as it would cause epileptiform seizures and speech affections from the involvement of Broca's convolution. I have recorded a case in vol. iii, *Archives of Neurology*, of such a nature, in which the pupils were unequal, there was no optic neuritis, no vomiting, no severe headache. He was seen later by Dr. Percy Smith, who agreed with me that it was a case of general paralysis; he was then certified and sent to the asylum. The attendants there said he was a general paralytic, but not an ordinary case. Not infrequently the effect of treatment by mercury injection is associated with diminution of the swelling of the discs, and even when there is no history of syphilis this result would point to its being the probable cause. I recently saw a woman in one of the London County Asylums, and had her transferred to Charing Cross Hospital. Mr. Collins found five diopters of swelling in each disc. After a course of mercurial treatment the swelling went down rapidly to two diopters, and from being unable to read large print, she could read quite small, the headache ceased, and the vomiting no longer occurred. The cerebro-spinal fluid of this case did not give the Wassermann reaction, although it contained a considerable excess of lymphocytes; but then we know that in only about 25 per cent. of cases of syphilitic brain disease does the cerebro-spinal fluid give a positive antibody result. Lymphocytosis by itself is not sufficient evidence to prove that the disease is syphilitic, but the result of treatment combined with this makes it fairly certain that it was a syphilitic gumma that caused the symptoms in this case. When a gumma has gone on to

the later stages of necrobiosis and formation of dense scar tissue, as not infrequently happens in syphilitic neoplasms of the brain, the chances of successful treatment by mercury and iodide of potassium are more improbable. If epileptiform convulsions or epilepsy have become established, it is no proof, therefore, that it is not syphilitic because the fits do not cease after administration of antisyphilitic remedies. I have seen quite a number of such cases which have been treated efficiently with antisyphilitic remedies in which the fits continued, and which at *post-mortem* examination still showed an old caseous focus commingled and surrounded with dense scar tissue; consequently the treatment failed to produce resolution, and the symptoms of irritation had continued. The early diagnosis of a syphilitic gumma is therefore of great importance for successful treatment. A gummatous pachymeningitis giving rise to headache and pain on pressure, but without the general signs of increased intracranial pressure—namely, optic neuritis and vomiting—may occur. I have seen such cases with localizing symptoms, and one which I diagnosed during life in Hanwell Asylum was of interest, inasmuch as it failed to yield to antisyphilitic remedies, but had it been transferred to the hospital it could have been treated surgically with almost certain success. (See *Archives of Neurology and Psychiatry*, vol. iv.)

General Paralysis.

It will be gathered that my object hitherto has been mainly to exclude from the diagnosis general paralysis, but in doing so I have alluded to most of the mental and bodily symptoms of this disease. Although grandiose delusions are very common in general paralysis, and occur in the majority of the cases, sometimes indeed persisting from the earliest period when the disease is diagnosed until the fatal termination, yet some cases of paralysis are associated with marked mental depression and hypochondriasis, while others are characterized simply by a progressive paretic dementia. Sir Alex. Morison, in his *Physiognomy of Mental Diseases* (1840) gives a very good clinical account of general paralysis, and remarks that Drs. Calmeil and Esquirol (he should have added Bayle) had given the disease the name of "general paralysis of the insane," but by the regulations of Bethlem Hospital cases of this description for upwards of fifty years have been excluded; nevertheless, patients in the early stage of the disorder, have been frequently admitted, and have undergone treatment for a limited time, so it is well known there. Thus he says:

When a patient is brought to the hospital expressing ideas of high rank or expectations, great abilities, extensive possessions or much wealth, particularly in articles of gold, with impaired memory and weak volition, or what may be termed infirmity of purpose, and at the same time has a slight difficulty and hesitation in speech, and an unsteady and tottering gait in walking, it is concluded that he labours under this formidable disorder in its early stages, and that there is little or no chance of his recovery.

Sir A. Morison, it may be remarked, was attached to Bethlem, and must have been aware of Haslam's description. But long before Haslam had differentiated this form of paralytic insanity, the keen observation of Hogarth had depicted inimitably some of its most characteristic symptoms in a scene in Bedlam of the Rake's Progress, 1735. I here reproduce two drawings (taken from this scene) from Morison's *Physiognomy of Insanity*, with the explanation, p. 279:

Upon these portraits Gilpin observes that the self-satisfaction and conviction of him who has discovered the longitude and the mock majesty of the monarch are admirable; the latter deems himself worthy of a crown, and sits in an attitude of great pomp, viewing his wooden sceptre and wearing his paper crown with as much conviction of his dignity as any monarch in Europe. The mind of the other seems lost in thought, and Hogarth's peculiar genius appears in his having the geographer whose element is ranging the wide world closely mewed up in a corner.

What better example could one have of the loss of autocriticism to which I have referred so often as being so significant of paretic dementia? (See illustration.)

There are many types of general paralysis; but there are a few phenomena which are seldom or never absent: (1) progressive dementia affecting the mind in its totality usually accompanied by elation, motor activity and grandiose delusions, sometimes by depression, motor inactivity and hypochondriacal or persecutory delusions; (2) pupillary affection—the pupils may be unequal, they are generally irregular and react sluggishly or not at all to light, but react to accommodation; (3) progressive paresis with tremor, especially affecting the tongue and face muscles; (4) hesitant, tremulous, slurred speech with elision of syllables; (5) similar affection of the handwriting, and often even in the early stage of the disease, the subject matter denoting dementia and delusions combined with the tremor, the elision or repetition of letters and syllables, suffice for a diagnosis; (6) altered knee-jerks generally exaggerated, sometimes absent on one side, or on both sides without Babinski's sign or ankle clonus. When the above symptoms are present there is little difficulty in diagnosis, but in the earliest prodromal stage, sometimes termed "the medico-legal," there may be considerable difficulty in forming an opinion, and the most experienced authorities make mistakes. I shall, therefore, only point out some of the manifestations of this early prodromal period. A modification of character and conduct occurs, the patient may become depressed, irritable, ill-tempered, preoccupied, moping, and hypochondriacal; or he may become unusually restless, active, and excitable, full of new ideas and schemes, neglecting his business, profession, and family; he may launch into speculations, purchase goods for which he has no use, or he may give himself up to immorality, and even depravity. At this period alcoholic abuse is very frequent; hence at the commencement of paretic dementia toxic disturbances frequently complicate the clinical picture, making the diagnosis more difficult. A hyperaesthesia sexualis is frequent, and the increased sexual desire, with impairment or loss of function, may lead to criminal acts which may bring him into the police courts. In this medico-legal period he may get into the police courts for acts of drunkenness, theft, attempted suicide, manslaughter, or homicide. The loss of control and impulsiveness is in a large number of cases aggravated by alcohol, so that he becomes a danger to himself and others; yet it is not uncommon *at this period* to find that the patient is not unconscious of his morbid state, and it may be very difficult to certify him, as he may apprehend the object of your visit and take care not to give himself away. As a rule, however, even in the early stage, he is not critical of his own conduct and behaviour; moreover, grandiose ideas are often easily revealed by suggestion; moral optimism and approval is frequent.

The most important somatic disturbances in the prodromal stage are apoplectiform, epileptiform, and congestive seizures. I have known many cases in which such attacks have preceded years the *definite* signs of dementia. These

attacks may be followed by transitory paralysis in he form of aphasia, hemiplegia, monoplegia, etc.

It is in cases of doubtful diagnosis that the pathologist can afford help by the employment of methods of examination of the blood and cerebro-spinal fluid, to which I fully referred in the Morison Lectures, but which I will briefly note again, for since I gave the lectures I have found these methods of great use in the diagnosis of several early doubtful cases of general paralysis.

EXAMINATION OF THE CEREBRO-SPINAL FLUID.

The Wassermann-Neisser-Brück Method.

This test may be carried out in the following manner. It is necessary first to immunize an animal against the blood corpuscles of some other animal—for example, by injecting the blood corpuscles of an ox into the circulation of a rabbit. After several injections the blood serum of the rabbit becomes haemolytic to the blood corpuscles of the ox by virtue of the presence in the serum of an immune body *plus* the normal complement or cytase. The latter is removed from the serum after withdrawal from the rabbit by heating to 56° C. for thirty minutes. There is then left in the rabbit's serum the immune body, which by itself will not dissolve the red blood corpuscles of the ox. The addition, however, of a small amount of guinea-pig serum which contains complement will at once restore its haemolytic properties.

The actual experiment consists in mixing the serum or cerebro-spinal fluid to be examined in varying dilutions with a watery or alcoholic solution of the liver of a syphilitic fetus; a small amount of the serum of a guinea-pig is added, and the bulk made up to a constant volume (about 2 c.cm.) with saline solution. The series of tubes containing these mixed solutions are placed in an incubator at 37° C. for one hour, and then the sensitized corpuscles are added. By sensitized corpuscles I mean the washed corpuscles of the ox to which has been added the heated rabbit's serum. The mixtures are again placed in an incubator for two hours at 37° C., then removed and placed on ice overnight. The next morning the amount of haemolysis in each tube can be estimated. If, on the one hand, antigen (contained in the extract of the syphilitic liver) and antibody (in the serum or cerebro-spinal fluid) have been present they have united with the complement (provided by the guinea-pig serum), and no solution of the corpuscles will have taken place, because the complement has been fixed before the addition of the sensitized corpuscles. If, on the other hand, the antibody was not present in the serum or cerebro-spinal fluid, then the complement in the guinea-pig serum has remained free to act on the sensitized corpuscles, and to lead to their solution (haemolysis). A control experiment using normal serum or cerebro-spinal fluid—namely, one which contains no antibody—must be made at the same time.

In order to make the *antigen* test, the blood serum or cerebro-spinal fluid is used in place of the syphilitic liver extract, and tested in varying dilutions against a serum or cerebro-spinal fluid which has previously been proved to contain antibody in known amount.

The Noguchi Method.

A simple method introduced by Noguchi consists in boiling two parts of the cerebro-spinal fluid with five parts of a 10 per cent. solution of butyric acid in saline solution for a few seconds and then adding one part of a normal sodium hydrate solution and again boiling briefly. A flocculent or granular precipitate is obtained on standing in parasyphilitic affections, due to the presence of a globulin. The test is useful in distinguishing general paralysis from other forms of insanity not associated with meningo-encephalitis.

Cyto-diagnosis.

The number of leucocytes present in the cerebro-spinal fluid may be estimated approximately by the following methods:

1. A drop of the fluid which has been previously well shaken is placed in the chamber of a Thoma-Zeiss haemacytometer and the cells allowed to settle. The number of cells lying over the 400 squares of the chamber multiplied by 10 will give the number of leucocytes in 1 c.mm. of the fluid.

2. The cerebro-spinal fluid is centrifuged and the supernatant fluid poured off. The residue is removed in a capillary pipette, blown on to a slide and allowed to dry. Stained with Leishman or Jenner's stain the residue from a normal cerebro-spinal fluid will show at the most only two or three lymphocytes in the field with a magnification of 400 diameters, whereas in progressive parasyphilitic affections the lymphocytes are markedly increased in number.

An Address
ON
CHRONIC INTESTINAL STASIS.*

BY

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GENTLEMEN,—I am very pleased to have this opportunity of addressing you on a subject that has afforded me the greatest interest, as I am most anxious to have the benefit of your opinion upon it, knowing that you will consider it with an open mind. I hope, however, that some of what I have written about it may not be completely unknown to you, and that it has possibly already received your attention and kindly criticism. Chronic intestinal stasis comprises the conditions arising in consequence of the progressive development of an imperfect or delayed functioning of the gastro-intestinal tract. While constipation is the most frequent objective evidence of unsatisfactory drainage associated with chronic intestinal stasis, it happens not uncommonly that there may be a daily evacuation. In some cases the motions may be abnormally frequent and loose. Therefore the character and frequency of the evacuations are by no means constant in this condition.

PATHOLOGY.

I will endeavour to describe what I consider to be its pathology.

1.

In the first place there is the dilatation and extension of the caecum into the true pelvis, associated with the development of retaining bands or mesenteries between its outer aspect and the adjacent peritoneum lining the abdominal wall. The caecum may become so distended that, after occupying the true pelvis, it ascends upwards from it.

2.

Secondly, there is the fixation of the appendix by retaining bands continuous with those holding up the caecum, and securing the appendix usually about its centre, sometimes by separate bands, and at other times by a band blended with the normal mesentery of the appendix. This band is continued by the proximal portion of the appendix, and forms together with it a retaining support helping to hold up the caecum, and oppose its descent from its normal position.

The drag exerted upon the caecum, upon the proximal part of the appendix, and upon its retaining band of peritoneum, produces a kinking of the lumen of the appendix at its point of fixation, since the distal portion of this structure is necessarily tilted abruptly upon its proximal segment. The degree and chronicity of this occlusion produce varying results, all of which are grouped under the heading of "appendicitis." The point of the abdominal wall to which the appendix becomes secured varies within wide limits, but it is usually anchored to the iliac fossa. If, however, it is fixed to the posterior wall or floor of the true pelvis, the appendix in the female finds itself in dangerous proximity to the right ovary which is affected by any inflammatory change in the appendix, while during menstruation the engorgement of the ovary and adjacent structures accentuates any trouble in the appendix.

Though surgeons refuse to recognize the causation of these bands obstructing the appendix, they know that adhesions exist about it very constantly, and they are always very ready to avail themselves of these adhesions as an excuse for removing the appendix when they have

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opened the abdomen on a wrong diagnosis of disease in some other organ, such as stone in the gall bladder, duodenal ulcer, stone in the kidney or ureter, etc. At the operation, when the incorrectness of the diagnosis is plain to all, they satisfy their own conscience, the medical attendant, and the patient and his friends by removing an appendix anchored in the manner I have described.

3.

The ascending colon is anchored to the peritoneum lining the abdominal wall external to it by similar bands, while the hepatic flexure is drawn upwards and outwards to an abnormally high level by the presence of bands of peritoneum of considerable density.

4.

The transverse colon forms a loop the convexity of which reaches in some cases into the pelvis, where it struggles with the caecum for priority of occupation.

Bands of peritoneum bind the convexity of the transverse colon to the adjacent ascending and descending segments of the colon. Above these viscera are bound directly together by newly-developed adhesions, but below they are connected by an acquired mesentery.

5.

The splenic flexure and descending colon present changes similar to those described on the right side.

In the large bowel generally the strain exerted by restraining bands may so control it as to reduce its lumen very materially at one or more points.

6.

The changes in the sigmoid are perhaps the most striking and obvious. They arise in precisely the same manner as those already described. Nature makes an effort to convert the mobile loop which would attempt to occupy the pelvis into a narrow fixed straight tube connecting the descending colon and rectum.

This is effected by the development of little bands which pick up the outer aspect of the meso-sigmoid and secure it to the adjacent peritoneum. This process continues till a proportion of the outer wall of the sigmoid itself is secured to the iliac fossa, and the tube is rendered fixed and straight, all evidence of the original loop having disappeared. This ideal condition does not always exist, since the bulk of the mesentery may not have been grasped securely by the newly-developed adhesions before the ends of the loop have been secured and approximated by them. Consequently a very considerable dilatation of the sigmoid results, and when it is completely obstructed it is called a volvulus.

The fixation of the sigmoid by these acquired adhesions may be irregular, and obstruction may occur at one or more points in its length.

Unfortunately for the left ovary it lies in immediate relationship with the meso-sigmoid, and it very frequently indeed becomes involved and fixed in the acquired adhesions. In some cases it appears as if the ovary is merely anchored to the contracting meso-sigmoid by adhesions, while in others the ovary may be completely surrounded by and included in the altered meso-sigmoid.

7.

The fixation of the left ovary is very detrimental to that structure since it is followed sooner or later by a cystic change in that organ. In some cases the ovary may be infected with a chronic inflammation, or suppuration may result in it necessitating its removal. Very rarely the sigmoid may be so much involved by the process that it may be necessary to resect a portion of it also.

The cystic ovary, completely surrounded by the adhesions, may after a time again become mobile in a cavity developed in them and later may escape from it. It then ceases to have any apparent connexion with the adhesions in which it was embedded except in so far as the association of an anchored sigmoid and a cystic ovary is observed to exist.

8.

The ileum is very thin-walled and flaccid. If its termination is drawn upwards so as to expose the under surface of its mesentery the peritoneum forming its posterior surface is picked up in puckers precisely like the meso-sigmoid but not so effectually. This is clearly with the object of helping to support the loaded caecum and oppose its displacement.

9.

The stomach is dragged downwards by the pull exerted upon its convexity by the depressed transverse colon, while the pylorus and first portion of the duodenum are bound to the under surface of the liver and often to the cystic duct and gall bladder. The stomach is dilated apparently because of the kink effected at the exit by the downward drag on the convexity of the stomach and the resistance offered by the adhesions binding the pylorus and duodenum to the liver.

Owing to the very different construction and mechanics of the abdomen and of the viscera in the sexes the mode of anchoring of the pylorus and duodenum differs somewhat. I believe that this variation is responsible for the greater frequency of duodenal ulcer in the male and of gastric ulcer in the female.

The posterior surface of the stomach is not infrequently adherent to the peritoneum covering the pancreas, etc.

10.

The gall bladder is generally full of bile, and gall stones are not infrequently present. The development of gall stones may be consequent on the stagnation of bile in the gall bladder whose evacuation is impaired by the drag upon it or upon its duct by the anchored duodenum and pylorus and by the prolapse of the liver itself. Women being much more frequently affected by intestinal stasis than men suffer more often from gall stones. It is a noteworthy fact that, while gall stones do not form in cases of intestinal stasis in which loss of flesh results at an early period of life from toxic absorption, they do so very readily in stout women in whom intestinal stasis develops in a marked degree comparatively late in life.

11.

The breasts show changes which vary from a recurring mastitis affecting the upper and outer segments of the breasts, and especially of the left, to a definite cystic degeneration involving the whole of both breasts. These degenerated breasts are very susceptible to the development of malignant disease.

12.

The kidneys are mobile.

13.

There is very little fat.

14.

The skin is stained and inelastic.

15.

Respiration is chiefly diaphragmatic.

16.

The circulation is bad, as evidenced by the coldness of the extremities.

17.

The muscles are very friable and small in bulk.

SYMPTOMS.

The symptoms produced by this condition of things are due in part to the interference in the normal functioning and is expressed by pain, and in part to the absorption of poisonous material, and is evidenced as toxaemia.

While toxic symptoms may exist without pain, pain has always associated with it definite evidence of auto-intoxication. I would just mention that many of the objective evidences of auto-intoxication, such as pigmentation of the skin and bad-smelling perspiration, are much influenced by the colour of the hair. In light-haired people a very advanced condition of poisoning may exist without the presence of these symptoms, while in dark-haired people these evidences appear at an early period.

Pain is due apparently to the distension of a portion of the bowel with faecal contents and their gaseous products or by the passage of faecal material through it. For instance, the distension of the caecum is a frequent and distressing symptom.

Pain about the hepatic and splenic flexures, both in front and behind, results from the obstruction which exists at those points and from the drag or strain upon the retaining bands by the loaded bowel in the erect posture of the trunk.

Pain in the sigmoid segment may be due to the difficulty in forcing the contents through a fixed, straight tube of diminished calibre, length, and elasticity whose mucous membrane may be gorged, inflamed, or even ulcerated, or to the distension of a loop or loops placed at a mechanical disadvantage by irregular anchoring by adhesions. Pain also results from the distension of the stomach, and also of the small bowel because of its delayed functioning.

Pain in the fixed left ovary is frequently a distressing symptom, especially at the periods. The fixation of this irritated organ renders it very tender on pressure, especially if examined bimanually, since it cannot readily avoid the pressure of the fingers as does a mobile ovary. Apart from this, there are the mechanical symptoms which ensue from the progressive development of the cystic condition of the ovary, which is now found to be more frequently malignant in structure than was supposed.

Degenerative cystic changes in the breast are very commonly present in a varying degree in certain cases of chronic intestinal stasis. This change is usually first observed in the upper and outer segment of the left breast, and later in the corresponding area of the right breast.

In the young unmarried woman chronic mastitis which is accentuated at the periods is very common. It affects the same areas of the breasts as does the cystic change which appears later. In a number of patients on whom I have operated for chronic intestinal stasis one or both breasts had been removed for cystic degeneration. This condition has been called Schimulbusch's disease. I have been much struck by the fact that these degenerative conditions do not arise in the breasts of women having regular intercourse, however toxic they may be, while they develop very rapidly on its cessation. How far the mechanical impairment of the sexual apparatus here referred to is responsible for the loss of sexual appetite which is a very marked feature in these women, and how far it is consequent on the associated toxaemia, is a matter of question. In any case it is much influenced for good by the cessation of the auto-intoxication following on some satisfactory treatment of the defective intestinal drainage. It is not improbable that the more frequent presence of cystic change in the left breast results from the fact that the left ovary is damaged and rendered cystic very much more often than the right, owing to its fixation by or inclusion in the bands which obliterate the meso-sigmoid and shorten and straighten the sigmoid.

The pain due to movable kidneys, gall stones, gastric and duodenal ulcers, pancreatitis, renal conditions due to the narrowing of the right ureter by the band retaining the appendix or by suppuration about the appendix, uterine versions and flexions, and to many other conditions, which I believe are all effects of chronic intestinal stasis, are fairly characteristic.

It is difficult to separate abruptly the symptoms that are brought about mechanically from intestinal stasis from those which result from the consequent auto-intoxication, since many are due to both.

Here I would like to call attention particularly to the work of Dr. Victor Vaughan and Miss Wheeler *On the Effects of Egg White and its Split Products on Animals*, and of Dr. Turck *On Experimental Studies on Round Ulcer of the Stomach and Duodenum*. I can do no more than refer to them here, but their importance in reference to intestinal stasis is obviously very great indeed.

The chief toxic symptoms are headache, a feeling of mental and physical lassitude, an inability to perform the ordinary duties of life, mental misery and distress, nerve symptoms as migraine, etc., which are comprised usually under the term of biliousness, and a want of control over the temper which renders these patients unhappy and unpleasant companions.

The symptoms for which the patient seeks relief at the hands of the surgeon vary materially with the position and occupation of the sufferer. While the unfortunate governess or domestic servant will struggle on until complete physical disability renders her incapable of performing her duties, the woman who has not to earn her living calls attention rather to the mental distress from which she suffers. For this reason the patient in good circumstances receives attention at a much earlier stage in the disease than the poor worker, and either requires a less extensive operation, or benefits much more from a serious one. Too frequently the poorer patient has reached a stage in which operative procedures, however extensive, afford only temporary benefit, since the distension of the small intestine, having reached a certain limit, is liable to return and progress after an interval, and there is associated with this distension pain for which very little relief can be afforded.

Of the many cases of chronic intestinal stasis in private practice which called for operative interference, in nine only have I removed the large bowel. Of these one died, and that accidentally, from the bursting of a small deep-seated stitch abscess into the general cavity. Of the larger number of private cases in which division of the ileum and its junction with the large bowel was effected, there was no death from the operation. One of these patients died six months after the operation from acute obstruction. The cases in which simple division of constricting bands, or the establishment of a junction between the occluded ileum and the sigmoid or rectum, are sufficient are much more commonly met with in private than in hospital practice.

Auto-intoxication reduces the resisting power of the individual to the entry of organisms of various sorts and facilitates their obtaining a foothold in some of the tissues of the body. I will call attention to only one organism, the tubercle bacillus, since it illustrates very well this depreciation in the vitality of the tissues. The examination of a large number of dark-haired children affected with chronic tuberculous disease of joints will show the presence in them of unmistakable signs of auto-intoxication.

The examination of a number of girls suffering from lateral curvature or fixation of the asymmetrical position of rest will afford striking evidence of the effect of the toxin in depreciating the respiratory capacity and energy of the individual and will show them to be characteristically toxic. In them, as in the tuberculous cases alluded to, thoracic respiration is more or less completely in obeyance.

Treatment.

If I have done nothing more than impress on you the importance of regarding chronic intestinal stasis as a very serious condition and one of which the capacity for harm is great and far-reaching in its results, I shall feel that my efforts have not been without result. We must acquire as thorough a knowledge as possible of the causation and pathology of delayed intestinal drainage and so endeavour to render our treatment of its several stages as scientific as possible.

I do not propose to discuss the medical treatment here, but will assume that the condition has developed to a degree that such treatment is obviously inefficacious to give the relief required. In other words, a stage has been reached in which owing to the delay in evacuating its contents the large bowel has not only ceased to perform a useful function, but has become such a source of danger that its removal from the drainage scheme will be of great service to the body.

It depends on the degree of development of the condition as to whether it is sufficient to separate and destroy constricting bands, or to divide the ileum and to connect it with the sigmoid or rectum, or whether it is necessary to remove the large bowel proximal to the junction. While in an early stage, and especially in the male subject, the obstruction at the hepatic or splenic flexures or at the sigmoid may be relieved by the division of bands producing constriction, in a late stage, when the small intestine has undergone extreme changes, the removal of the whole of the large bowel proximal to a junction between the small intestine and the sigmoid affords only a temporary alleviation of symptoms.

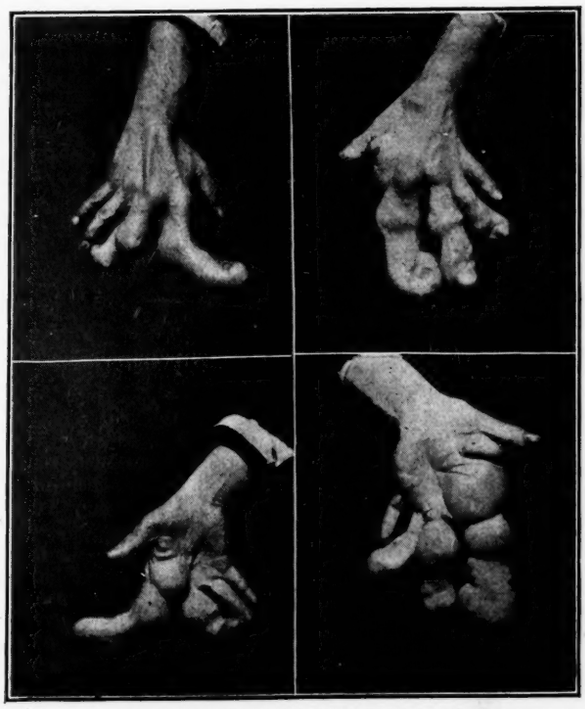
The most favourable cases for operation are those in which the symptoms are of a toxic rather than of a painful nature. In such the division of the ileum and its junction with the lower part of the large bowel give complete relief to the symptoms and the consequent physical and mental improvement is extraordinary. When painful symptoms are much in evidence the large bowel should

be removed. The risk entailed by operation can be reduced very materially by first relieving the toxic symptoms by connecting the divided ileum with the sigmoid or rectum, and later, when the general condition of the patient has improved in consequence of this procedure, the large bowel can be excised if the symptoms demand it. I do not pretend that removal of the large bowel is not a very serious operation in certain circumstances. Indeed, in many of these patients any serious operation must be regarded as being dangerous to life, the danger varying chiefly with the degree of toxicity. I may say that in these and similar cases the risk can be very materially reduced by the subcutaneous injection of a large quantity of normal saline solution immediately before the operation. By this means the patient appears to suffer a minimum of shock from the extensive operative procedure, and vomiting either does not follow it, or should it do so, it is trivial in character. In these cases the absence of vomiting is a matter of very great importance. It was very frequent and severe after my earlier excisions of the large intestine, and was the cause of more than one fatal result. Besides the distress and depressing influence it exerted on the patient, the constantly recurring strain on a long wound was very liable to render it insecure or to determine the development of a septic infection in it, which would probably not have occurred had the recently incised structures been kept at rest. The risk of an infection starting in the peritoneal cavity appears to be very small. The mode in which the subcutaneous transfusion of normal saline, employed immediately before the operation, acts has been very clearly demonstrated by Dr. Crile's most interesting and valuable researches on the production of shock, of which America must be very justly proud.

HYPERTROPHIC OSTEO-ARTHROPATHY OF HANDS WITHOUT VISCERAL OR CONSTITUTIONAL DISEASE.

By R. CARMICHAEL WORSLEY, M.R.C.S., L.R.C.P.,
COVENTRY.

J. L., the subject of the deformity illustrated by the accompanying photographs is a man, aged 47, one of a family of fifteen. One brother was born with two toes fused on one foot, the other foot normal. There is no history of any other abnormality in the family. The parents were not related in any way. The father was a very big, strong man, and is said to have been "double jointed" in the hands. He was a smith. J. L. was born with hands apparently natural, except that the middle finger of the right hand was crooked at the top joint. At 2 years of age this and the index finger of that hand, and the same two of the left hand, began to grow out of proportion to the general rate of growth, and the enlargement was most marked from the eighth to the fourteenth year of age. From the sixteenth year of age they have not hypertrophied further, but only taken part in the general growth.



HYPERTROPHIC OSTEO-ARTHROPATHY OF HANDS.

The only movement now possible is at the metacarpo-phalangeal joint of the deformed fingers (the other fingers and thumbs having normal movement), all the other interphalangeal joints are ankylosed. At most of these joints (see photographs) there are large craggy nodosities, which feel cartilaginous, and over the dorsal surface of the metacarpo-phalangeal joints of the first and second fingers of the left hand and middle one of the right are to be felt movable bodies, evidently cartilaginous, of ½ in. to ¾ in. diameter, and one or two smaller pieces like "melon seed bodies." The enlarged fingers are transparent-looking at the more distal portions, and traversed by fine pink-coloured venules. The palms, especially the left, have huge pachydermatous pads, well seen in the photograph; the smaller pad next the thumb can be picked up, and has a thick, broad pedicle. The man generally carries his hands in his pockets. He is a boot finisher by trade, and says he can make a good living by it when work is plentiful. He has refused any operative interference.

BIOTRIPSIS, OR LIFE-WEAR: TROPHIC CHANGES IN OLD AGE.

[WITH SPECIAL PLATE.]

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THE appearance of the skin in an old person varies in different parts of the body. In this article I propose to call attention to the skin which has been subjected to the greatest exposure of the wear and tear of life. Dr. Head and Mr. Sherren have alluded to them[1]; but, although I cannot find definite reference to them as a whole, there can be no doubt that the appearances are not described now for the first time. The changes in the greatly exposed skin are so marked that I think the general condition deserves a term to itself, and I propose "biotripsis" (life-wear), and to speak of a process of biotriptic changes. The condition is important from another point of view, for on the parts where it is most marked there is prone to occur papillomata and cancer.[2] Hence, if it could be shown that biotriptic changes are related to neurotrophic changes, the demonstration would support the two theories:

1. That a neurotrophic disturbance is concerned either directly or indirectly with the genesis of cancer.
2. That a neurotrophic influence bears upon the direction and limitation of the spread of cancer.

The biotriptic changes are observed most commonly upon the backs of the hands, the temples, and the foreheads of old people, but I have seen some of the changes upon the lower lips, cheeks, forearms, and occasionally elsewhere. The skin becomes shiny, smooth, thin, inelastic, pigmented, and apparently scarred, although the last cannot be explained by solutions of continuity of which there is no history.

The skin which shows the changes to best advantage is that which covers the second metacarpal bone and its immediate neighbourhood. The coloured plate which accompanies this article reproduces the most marked state in which I have seen this condition. It shows the backs of the hands of an old woman, aged 72. She did not complain of her hands, and had noticed nothing peculiar about them until she found I took an interest in them. She has never suffered from "chapped hands," nor has there been a solution of the skin's continuity. For the main part of her life she has been the wife of an agricultural labourer, and her duties have been domestic and household. I showed these hands to a distinguished surgeon, and the first thing he did was to ask her, "How did you do this?"

The skin is shiny, smooth, inelastic. The subcutaneous

veins are almost subepithelial, there is a great degree of pigmentation, and there are in the most pigmented parts long radiating scars, which are more marked by loss of pigment than by the existence of cutaneous thickening. The condition is symmetrical; it is most marked in the region of the second metacarpal bone, and gradually fades away from this part. There is no similar change elsewhere on the hands. The tactile, heat and cold and pain sensations are not brisk, but it cannot be said that they are otherwise abnormal.

The condition very much resembles the bronzing of skin which has been subjected to prolonged exposure to the *x* rays. It is interesting here to remark that the two conditions are similar in another respect, namely, they are prone to be the seats of cancer.

It is difficult to account for biotriptic changes. In any country village in rural England many old people can be visited and the condition of their hands observed; it will be seen that they show great variety in the degree in which many of the biotriptic changes are present, although all their lives they have been exposed to practically the same wear and tear of life. Hence the same wear and tear of life can induce in different skins different degrees of the biotriptic changes.

Fig. 1.

Skin which has been deprived of its nerve supply becomes smooth, shiny, inelastic, and atrophied, and in herpes zoster it is scarred. With regard to the relation between pigmentation and nerve supply there is much evidence to show that it may be close. But from the evidence at our disposal we cannot state definitely whether disturbance of nerve supply (1) induces an intracellular manufacture of pigment, (2) or whether it induces changes in the blood vessel walls which allow diapedesis of red blood corpuscles, the pigment of which is deposited either outside the cells of the part, or even picked up by them and incorporated within them.

Anaesthetic leprosy, Addison's disease, melanodermia, leucodermia, moles, and the greyness of hair seen in the heads of people "turning grey"[3] all indicate by their distribution or associated nerve lesions a possible connexion between pigmentation and nervous influences.

The action of the nervous system upon normal pigment is shown in Lord Lister's classical experiment[4] in which he demonstrated that the change in colour of frogs when taken from the light into the dark and vice versa depends upon a reflex the afferent fibres of which traverse the optic nerves.

Sir Victor Horsley has given me leave to publish a very interesting case which is under his care, and I take this opportunity of thanking him. The case bears upon the relation of nerve supply and pigmentation. Fig. 1 shows the head of a little boy whose right forehead is bald, the bone atrophied, and the skin pigmented in the region supplied by the supraorbital nerve of that side. Ten years ago he knocked the upper margin of the right bony orbit against the handle of a door.

It is a curious case from many points of view, and it makes one wonder that cutaneous pigmentation does not occur with greater frequency after operative and accidental traumatism. Whether pigmentation can be associated in any way with the cancer process is an undeveloped question. It is well known that pigmented cancer is a highly malignant type of cancer. Does the presence of the pigment in the malignant epithelial cells mean that they possess great resistance and vitality?

It appears from P. Carnot's experiment that the normal pigmented epithelial cells of variegated guinea-pigs possess greater vitality or resisting power than their white epithelial cells when both kinds are grafted on to the same raw surfaces. There is at present no evidence to show that cancer is more frequent in negroes than in white races, nor can one say that the skin of brunettes is more liable to cancer than that of blondes, nor is cancer known to be more common on the most pigmented parts of the skin of any person, black or white.

Fig. 2.

Dr. Ironside Bruce has kindly sent me a case which bears upon this point. The patient is a woman, aged 60, and Fig. 2 shows that there is a rodent ulcer upon the internal extremity of the lower eyelid on the right side. The skin around the lower eyelid had become highly pigmented, especially at the point on which the rodent ulcer began, and some pigment also exists in a minor degree on the other side of the nose. This pigmentation had occurred some years before the appearance of the rodent ulcer.

Dr. Ironside Bruce's case is an example of what I mean, but it may be an exception to the rule, and more evidence is wanted on this point.

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SOME ASPECTS OF THE LEGAL RESPONSIBILITY OF MEDICAL MEN.*

BY

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HISTORICAL.

FROM the earliest times of which we have any authentic records, the responsibilities, liabilities, and privileges of medical men have been the subject of legislation. Yet the measure of that responsibility has varied greatly in times past, and amongst divers nations. The oldest known Code of Laws, promulgated by Hammurabi, King of Babylon, during the period 2285–2242 B.C., and which is believed by scholars of Assyriology to embody the best judicial decisions prior to that period, enacted the privileges, fees, and serious liabilities of those venturesome enough to practise medicine and surgery. After laying down a scale of fees which then, as now, varied with the social status of the patient, the code proceeds:

> If the doctor has treated a gentleman for a severe wound with a lancet of bronze, and has caused the gentleman to die, or has opened an abscess of the eye for a gentleman with a bronze lancet, and has caused the loss of the gentleman's eye, one shall cut off his hands.
>
> If a doctor has treated the severe wound of a slave of a poor man, and has caused his death, he shall render slave for slave.
>
> If he has opened his abscess with a bronze lancet, and has made him lose his eye, he shall pay money, half his price.

In later times, when priests assumed the function of medical practitioners and performed surgical operations, they enjoyed almost complete immunity as far as legal liability was concerned, for their knowledge, being supposed to be of a divine origin, was looked upon as infallible. On the other hand, among the ancient Egyptians the surgeon who ventured beyond the boundaries of the rules then in vogue, was liable to suffer corporal punishment even though the practice was successful. Among the western Goths the unsuccessful ministrations of the surgeon, if resulting in death, were followed by his being handed over to the vengeance of the relations of the deceased.

CRIMINAL LIABILITY OF THE MEDICAL PRACTITIONER.

The motives actuating every medical man must be to heal, to relieve suffering, and to prolong life. If he intentionally use any means to shorten life he is guilty of murder, and since the law imputes to any person the intention of bringing about that which is the obvious consequence of any wilful act, if he use any means, knowing that the inevitable resultant consequence thereof will be the shortening of life, he is guilty of murder. Moreover, although any person (whether qualified or not) who professes by way of occupation to deal with the life or health of His Majesty's subjects is bound to possess competent skill to perform the task that he holds himself out to perform, and is also under a duty to treat his patients with care, attention, and assiduity (R. *v.* Spiller, 1832, 5 C. and P. 333), these correlative duties are even more emphatically binding upon duly qualified and registered medical practitioners than upon others (R. *v.* Crook, indictment for manslaughter, 1859).

It is culpable negligence for a practitioner to omit giving either to the patient or to the person immediately in charge thereof, necessary directions as to the use of a dangerous drug, substance, or thing (R. *v.* Chamberlain, 1867, 10 Cox, C.C. 486).

It is, however, admissible evidence for a defence on a trial for manslaughter of a patient to show the remedial effects upon other persons of the particular means which caused the death of the person in question (R. *v.* Long, 1830, 4 C. and P., 398–423); but even if the remedial measures employed were the actual cause of death, or if the death was in any sense accidental or due to an honest mistake on the part of the practitioner, or if the fatal result was one which even with skill he could not reasonably have foreseen, he is not guilty of any offence, and the court will discourage a conviction where a practitioner has, with the bona-fide intention of healing, exercised his best skill, as in the case of R. *v.* Van Butchel, where the prisoner passed a rectal bougie on the deceased, who had a disease of the rectum. The instrument on being inserted caused great pain, and shortly after the patient died. *Post mortem* the rectum was found to have been perforated. The judge considered that this case did not even approach to manslaughter, and directed an acquittal.

It is improbable that any but very serious cases of malpraxis would be dealt with as crime at the present day, although, as a matter of strict law, even a technical assault, such as vaccinating without consent or examination against a patient's will, is a crime as well as a tort. To the honour of the profession, it may be added that such cases are of the rarest possible occurrence, and when they do occur juries are not eager to convict, except where they think that prisoner has shown culpable ignorance or inattention or rashness under all the circumstances of the case.

CIVIL LIABILITY OF THE MEDICAL PRACTITIONER.

In all cases of skilled or professional labour, where a man publicly practises a profession, he holds himself out as being properly equipped for its due performance. He represents and undertakes, therefore, that he is possessed of the necessary and customary skill pertaining to that profession (Harmer *v.* Cornelius, 28, L.J.C.P., 85). He does not, if an attorney, undertake that at all events you shall gain your case, nor does a surgeon undertake that he will perform a cure, nor does he undertake to use the highest degree of skill. There may be persons who have a higher education and greater advantages than he has, but he undertakes to bring to bear a fair, reasonable, and competent degree of skill (Lamphier *v.* Phipos, 8 C. and P., 479). Whether the practitioner be qualified or unqualified matters nothing. The legal wrong is the incompetent or negligent treatment, not treatment by one wanting a qualification. The qualified man is an expert, the unqualified man has put himself into the position of an expert, although in the case of one who did not assume to be a medical practitioner evidence of gross ignorance would be required to render him liable to damages in a civil court, whereas in the case of a regular practitioner the ratio would be such reasonable knowledge and skill as is usual among medical men.

The degree of skill requisite is such as may be expected in the circumstances of time and place from an average person in the profession, one neither specially gifted nor extraordinarily dull, and where the reasonable amount of skill proportioned to the duties that are undertaken is found, there is no liability for error of judgement in the application of knowledge. Each case depends upon its own circumstances, and where an injury has been sustained that could not have arisen except from the absence of reasonable skill, then there is liability (Hart *v.* Frame, 6 C. and F. 193). Nevertheless the standard of care and competence is variable, for example, that might be negligence in a doctor of repute who holds a recognized position on a hospital staff, which would not be so in the case of a village doctor in the wilds of Kerry. What constitutes a reasonable degree of skill cannot be defined. It is a question of fact to be determined by the jury in the light of the circumstances of each case.

Treatment involving probabilities of danger cannot be applied without communication to, and some expression of consent by, the patient, although the duty to forewarn the patient is discharged by a general intimation of likelihood of pain or danger without going into a scientific dissertation on the probabilities and peculiarities of the case.

A medical man is usually responsible for the torts of his apprentice or assistant if the act complained of be done under his directions, with his authority, and in the particular manner sanctioned by him, but not otherwise. Nor are doctors in a hospital responsible for the negligence of the nurses therein unless they are in close proximity to the patient at the time of the commission of the wrongful act, and consequently able to prevent it. If it be not the usual hospital practice for them to superintend every minor detail, a patient who goes there cannot complain if they omit to do so in his case.

Speaking generally, no one can be held responsible for another's negligence unless the relationship of master and servant or of principal and agent exists. Hence a qualified assistant or locumtenent is himself responsible for any negligence proved against him. He does not involve his

* From a paper read before the Medico-Legal Society.

principal unless the principal has employed him, knowing him to be incapable though qualified. And where, in a recent case, the plaintiff, a qualified medical man, sought to make the defendants, the governors of a hospital, liable for alleged negligence in conducting an operation upon him at the hospital, resulting in injury to his arm by burning and pressure while he was under the influence of an anaesthetic, it was held that the relationship of master and servant between the hospital staff and the governing body of the hospital did not exist, that if there was negligence, the operating surgeon who had control of the proceedings would be liable, but that the governors of the hospital were not liable for the negligence of the staff even if proved.

Relative Responsibility of the Surgeon and Anaesthetist.

There does not appear to be any recorded case in England in which either criminal proceedings for culpable negligence or a successful civil action has been brought against a medical man on account of a death resulting from or occurring whilst under the influence of a general anaesthetic, which is probably the reason why no authoritative ruling laying down the exact degree of responsibility attaching to the operator and the anaesthetist respectively has ever been given. In all probability each case would be left to the jury to be decided in the light of the particular circumstances, but as the question has been the subject of much recent discussion the following observations, though unsupported by direct authority, are submitted for consideration.

It is well understood in the profession that the administration of an anaesthetic is a grave and responsible duty requiring undivided attention and unremitting vigilance on the part of the administrator, who, as such, has nothing to do with the operation *per se*, except in so far as it affects the administration. If negligence be proved in respect of such administration, the medical practitioner actually administering the anaesthetic is liable, not the surgeon who is engaged in the operation. But if the surgeon take upon himself to decide the particular kind of anaesthetic to be employed, or the apparatus to be used, or the amount of anaesthetic to be administered, he would probably be held jointly responsible with the anaesthetist for any unfortunate result to the patient—assuming negligence to be proved. Liability as against the administrator might arise from omitting the duty of careful physical examination, of previous appropriate preparation, or from leaving the patient before the administrator has had reasonable grounds for assuring himself that the case could be so left in safety.

Liability, it is apprehended, might also arise from committing the irregularity of assisting the surgeon while engaged in the administration of the anaesthetic (urgent necessity excepted).

But where a nurse or student is engaged in the administration of an anaesthetic under the direct supervision of a medical man, there (it is apprehended) the relationship of master and servant exists, the nurse or student being under the direct control of the medical man as to method, quantity, and kind of anaesthetic employed; hence the qualified man is responsible. Where circumstances compel an operator to accept the services of an unskilled or non-professional person, the operator must take the entire responsibility of the administration.

It is customary, though not the invariable practice, for the surgeon to select the anaesthetist, and generally control the procedure of the operation. If an operating surgeon can be properly charged with selecting an anaesthetist who has not had sufficient experience to enable him to give the anaesthetic properly, in case of a fatal result the surgeon might be held liable.

But apart from gross negligence, which is probably of the rarest occurrence, it is submitted that attempts to make medical practitioners liable to legal consequences for deaths occurring while an anaesthetic is being administered would damage humanity at large.

Moreover, where pure anaesthetics are administered, it would be difficult, in view of the fact that differences of opinion exist as to the exact manner in which anaesthetics act, to state the precise mechanism of the fatal issue, and hence the extent of the responsibility of the administrator.

Consent.

The law extends its protection to all, not only against actual hurt and violence, but against every kind of bodily interference and restraint not justified or excused by allowed cause; and, speaking generally, and apart from certain statutory requirements under the Workmen's Compensation Acts, a medical practitioner has no right to treat in any way, or even examine another, without his consent (persons in the public service and convicted prisoners excepted); and, should he do so, this technically amounts to an assault, which may give rise either to criminal proceedings, or to a civil action for damages. Even in cases where the patient actually consents, if such consent is obtained by fraud on the part of the practitioner he is guilty of assault—for example, if a parturient woman consented to be attended in childbirth by a medical practitioner because she relied on his fraudulent statement that he had not been lately attending any cases of scarlet fever, his attendance on her under such circumstances would amount to an assault.

Nevertheless, there are also circumstances in which a man's person may have to be dealt with promptly for his own obvious good, but his consent, or the consent of anyone having lawful authority over him, cannot be obtained in time. And it is not an assault for a competent surgeon if he perceives that an operation ought forthwith to be performed to save life to perform it without consent, such being a work of charity and necessity.

Generally speaking, it is implied that the practitioner shall, so long as the relationship of doctor and patient exists, do all that is necessary in his opinion for the welfare of his patient, within his province, subject to the proviso that when a dangerous or extensive medical or surgical proceeding is contemplated, the patient ought to be warned of the possible consequences, and given an opportunity of declining to undergo the treatment proposed.

Where a practitioner is requested by a mistress to examine a servant who is believed to be pregnant, it is highly important to obtain the consent of the servant both to the examination and to the making known to the mistress the information gained thereby.

The great importance of obtaining consent to such surgical proceedings as may be found necessary is obvious in these days when "explorations" may reveal a state of things requiring subsequently prolonged and extensive surgical proceedings.

The law of England in its relation to medical men is not, as is too commonly supposed, a professional mystery, nor is it a collection of decisions which "squint both ways."

Though possibly uncertain in some few particulars and incomplete in others, yet, viewed as a whole, it takes full, and even generous, cognizance of the anxieties and difficulties inseparable from medical practice, and in its dealings with medicine, as with other arduous and honourable callings, it embodies those notions of fair play, justice, and humanity by which Englishmen are governed in their public and private affairs.

NOTES ON A THIRTY DAYS' FAST.

By F. PENNY, M.R.C.S.,
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These notes are from personal experience of myself, a medical man, aged 46, height 5 ft. 7 in., whose weight for years prior to 1905 had averaged 11 st. 3 lb. net. Since that date I have been a purin-free vegetarian, and have dropped about 10 to 14 lb. in weight.

I felt, and was considered to be, in fairly good condition, but I undertook this fast to endeavour to satisfy myself whether the accumulation of waste and unnecessary material in the system is the real cause of much disease, and whether a prolonged fast is a sound method of elimination and as such conducive to bettered health.

Most of my observations are tabulated, the measurements, weights, blood counts, etc., being checked by another medical man. The morning records were taken in bed about 9 a.m., and those of the evening between 10 and 11 p.m., before retiring. The respiratory count, being my own, may unconsciously have been modified for the occasion. The spirometer records were taken by a Lowne's spirometer, and, though relatively correct, I

Day of Fast.	Net Weight 142 lb.	Morning Observations taken about 9 a.m. before getting up.				Evening Observations taken about 10 to 11 p.m. before retiring.				Observations taken just after coming down in the Morning.			Exercise.		Drink: Aq. destill.	Urine.	
		Pulse.	Resp.	Mouth Temp.	Rectal Temp.	Pulse.	Resp.	Mouth Temp.	Rectal Temp.	Spirometer.	Dynamometer. R. Hand.	Dynamometer. L. Hand.	Walking.	Cycling.			
				°F.	°F.			°F.	°F.				Miles.	Miles.	Oz.	Oz.	Sp. gr.
1	137½	—	—	—	—	50	12	96.4	98.6	398	140	110	3	50	10	16	—
2	—	59	10	97.4	98.6	52	12	96.4	98	418	142	110	½	10	30	18	—
3	—	51	13	97	98	63	—	96	98	432	155	112	5½	—	20	32	—
4	132	52	15	96	97.8	45	—	95.2	98.4	422	145	117	6½	—	13	21	1022
5	—	45	13	95.2	98.8	72	—	96.4	98.4	412	150	130	3	13	45	18	1015
6	131½	44	12	96.8	97.8	74	16	96.8	99	410	157	127	6½	—	50	40	1015
7	128½	43	13	96.6	97.4	76	—	97.6	99.8	388	160	105	9	—	50	28	1028
8	—	43	14	96.4	97	46	14	96.8	98	406	135	105	2	8½	35	18	1033
9	—	44	11	96 2	97.2	48	12	96.8	98.4	385	160	115	3	13	45	16	1022
10	127½	42	11	96.4	97.2	48	13	96.8	98	412	160	118	7	—	40	42	1016
11	—	42	10	97	97.5	44	13	96.4	98	410	165	130	1	18	45	34	1016
12	126½	43	11	97	98	48	16	97	98.4	388	155	130	5	—	40	32	1016
13	—	39	11	96	96.8	45	12	96	97.8	402	170	132	6	—	45	55	1008
14	123	39	10	95 2	96.4	45	13	97	98	396	170	130	5	—	20	18	1020
15	—	39	10	95	96	44	12	96.8	99	382	170	120	7	2	40	21	1016
16	126½*	40	11	95.4	96.6	44	12	96.8	98.4	380	170	120	3	—	160	78	1008
17	—	42	10	95	96	53	12	96	98	390	160	118	6	—	30	28	1026
18	123½	39	11	94.6	96	46	11	96.4	98	388	160	120	3	—	70	48	1006
19	—	44	12	96	97	57	12	97.4	98.2	385	165	118	6	—	70	50	1010
20	—	42	11	95	96.4	49	13	97.4	98.4	375	160	125	5	—	60	56	1008
21	120¼	44	11	96	97	53	14	98.2	99	396	160	118	2	15	60	50	1006
22	—	46	11	96.5	97	53	14	98	98.6	395	155	120	4	2	50	48	—
23	—	44	11	96.5	97	52	14	97.6	97.8	395	170	115	1	8	50	52	1008
24	117	45	11	96	97	58	13	97.2	98.4	380	160	118	2	3	65	60	1006
25	—	44	11	95.8	96.6	52	13	97.6	98.8	360	155	115	2	—	50	40	1008
26	116	44	11	95.6	96.4	50	13	96.5	98	368	150	110	—	4	30	29	1010
27	—	44	11	95	96	50	14	96.4	98	365	150	105	2	8½	55	40	1008
28	—	43	11	95	95.6	65	13	96.8	98	333	140	110	2	—	45	38	1008
29	—	45	11	95	96	54	12	96,8	98	335	150	120	2	—	50	50	—
30	112¼	42	11	94.4	95.4	64	13	96.2	98	325	140	110	1	1	30	30	—
1	111¼	40	10	94	95.4	76	15	96.6	98	375	142	110	111	156			
2	113	48	12	95.4	96.4	80	—	97	98.4	385	140	105					

* Weight after drinking 4 pints.

consider them absurdly high, in spite of authoritative statements that the instrument gives correct readings. My respiratory capacity on a von Broeckmann's spirometer was before the fast 275 cub. in. and after its completion 255 cub. in.

My drink consisted of distilled water only, except that on the sixteenth day I added a little salt; on that day, as an experiment, I drank 8 pints.

Blood Counts taken on the Twelfth, Twentieth, and Thirtieth Days.

	Red Corpuscles.	White.	Polynuclears.	Large Mononuclears.	Lymphocytes.	Eosinophiles.
			Per Cent.	Per Cent.	Per Cent.	Per Cent.
Twelfth day	6,600,000	10,000	76	12	12	—
Twentieth day	7,000,000	11,000	76	18	6	—
Thirtieth day	6,000,000	8,800	70	20	7.5	1.5

200 corpuscles were counted on each occasion.

Haemoglobin varied from 104 to 112 per cent.

Blood pressure (taken by a Martin's modification of the Riva-Rocci sphygmomanometer) fell steadily during the fast from 110 to 90.

Measurements.

	Before.	After.
	Inches.	Inches.
Neck	15	13¾
Chest expanded	38½	35
Chest contracted	34½	31½
Abdomen	31	26½
Hips	35¾	32¾
Thigh	21	18
Calf	13½	12¾
Ankle	8¼	7¾
Arm	13	11¼
Forearm	11¾	10½
Wrist	6¾	6½

My urine remained acid and clear until the twenty-second day, after which there were copious deposits of "uric acid crystals" and also of "urates." I had been subject to bouts of this sort for years whilst on a mixed

diet, but I shall be glad of the explanation of such an occurrence after a twenty-two days' fast. The bowels acted only after enemata, eight plain water ones being given. Three Turkish baths were taken to assist elimination.

My time was occupied chiefly in reading, exercise, and conversation. I retired generally between 10 and 11 p.m., and generally spent twelve to fourteen hours in bed with the windows wide open. My average loss of weight was 1 lb. a day. My exercise was walking three miles and a half and cycling five miles and one-fifth a day. After the first two days I felt no hunger. I suffered much from cold, especially in the feet and hands, probably to some extent due to my being too lightly clothed for this climate. At times I was very irritable. Throughout the fast my tongue was coated and my breath offensive. During the last eight days I had very little inclination for exertion of any kind.

This fast was broken on the completion of thirty days with 1 lb. of fruit, in spite of eating which my weight dropped 1 lb. during the next seventeen hours, and my urine was loaded with "urates." Then I took fuller meals of milk, rice, fruit, toast, honey, etc., and gained weight rapidly (4¾ lb. in two days). I then had some travelling to get through, and on the third day took a long railway journey, including crossing London; on the fourth day I cycled fifteen miles, and took another long railway journey, and during the following night I had acute dyspepsia with very violent diarrhoea, which latter continued, with intermissions, for three days. After this I ate well and steadily, gained weight (10 lb. in ten days). During the third week my mouth was very tender, and my sublingual glands were considerably swollen, and during this week I gained 3 lb. in weight.

For some days during the second and third weeks there was very free diuresis.

This fast was not carried to a finish—that is, until my tongue cleaned and natural hunger returned, as described by Dr. Dewey—and I have not yet completely satisfied myself with regard to the objects for which the fast was undertaken, but I hope for better success next time.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF TRUE ELEPHANTIASIS.

The unfortunate young Zulu shown in the photograph was committed to gaol for a breach of the peace; his age is from 22 to 25; he is pleasant and intelligent and in good health, with the exception of the condition of his foot and leg. He was, he says, in a normal state of health up to 8 or 9 years of age, when the trouble commenced in his foot, and has gone on to its present state. He tells me that he is the only member of his family with this affection, and he has not heard of any ancestor being so troubled. He has a little pain at intervals, but, as a rule, beyond the weight and unwieldy condition, he is not troubled. I find there are two or three similar cases in this district, which is a small percentage, considering that there are about 30,000 natives in the Mapumulo division. Unfortunately I did not get a lateral picture, which would have shown more folds of hide-like skin so characteristic of the elephant.

H. S. Reynolds, F.R.C.S.E.,
District Surgeon, Mapumulo, Natal, S.A.

NAEVUS PIGMENTOSUS.

The accompanying illustration shows an Armenian child, aged 2, who was seen by me in Ispahan, Persia. She was being taken to India to be exhibited. She is a bright, intelligent girl, rather fairer than is usual among children here. Large hairy moles cover a large portion of her body. There are considerably over 100 in all. The largest is on the left side, extending from the region of the left scapula behind to about 2 in. to the right of the umbilicus in front. In its widest part it measures 12 in., breadth 7 in., diagonally 17 in. There is a patch 5 in. by 4 in. on the right buttock. There is one tuft of hair above the left eyebrow, otherwise the face is normal. There are several moles on the scalp. Both labia have an outgrowth of hair on them. The moles on the legs are more pedunculated in character. The hair on the moles is about 1½ in. long and darker than that on the head. It is very fine.

The patient is the third of a family of four children. There is no hereditary history of naevus pigmentosus, nor of maternal impression.

Eliz. N. MacBean Ross, M.B., Ch.B.Glasg.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

KENSINGTON INFIRMARY.

EPITHELIOMA OF OESOPHAGUS IN A WOMAN AGED 26.

(By J. Basil Cook, M.D., D.P.H., Senior Assistant Medical Officer.)

M. C., aged 26, was admitted on April 23rd, 1909, and died two days afterwards.

History.

She had been losing flesh for three months, and for the past seven weeks had experienced considerable difficulty in swallowing. There was no family history of cancer.

Condition on Admission.

She appeared very ill, was emaciated, and was quite unable to swallow solid food, and liquids only with difficulty. There was no coughing or regurgitation after swallowing, but she groaned both when awake and asleep. No history could be obtained of her having swallowed any hot or corrosive fluid; there was no evidence of syphilis, nor any sign of thoracic growth, aneurysm, or pharyngeal abscess. The heart and lungs were normal. There was some obstruction of the air passages as there was marked recession on inspiration. At the level of the cricoid cartilage there was a slight fullness of the throat, and about 2 in. lower down on the right side a small, hard gland was easily palpable. There was an offensive blood-stained discharge from the throat. An unsuccessful attempt was made to pass various sized bougies, which when withdrawn were bloodstained. The obstruction was opposite the cricoid cartilage. The patient was fed with nutrient enemata.

Post mortem there was an epitheliomatous growth completely surrounding the upper end of the oesophagus, and extending downwards for a distance of 4 in. Beyond the small gland in the right side of the neck there was no sign of secondary deposit anywhere. The thorax and the organs of the body were free. The tonsils were apparently healthy.

Remarks.

This case is chiefly interesting on account of the rarity of the condition in so young an individual. Gastrostomy was contraindicated because of the grave condition of the patient. The offensive discharge and obstruction to the passage of a bougie enabled one to diagnose the case and to eliminate the hysterical dysphagia occasionally met with in young women.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Friday, May 14th, 1909.

W. G. SMITH, President, in the Chair.

Clinical Evening.

DRS. O'CARROLL and PURSER exhibited a case of *Progressive bulbar paralysis* in a man 56 years of age. A year ago the patient first noticed a certain amount of difficulty in his speech. It was very indistinct, but still intelligible. He was now hardly able to protrude the tongue beyond the lips. He had a little difficulty in getting food back, but he did not complain of difficulty in swallowing, except occasionally with liquids. He complained of difficulty in holding his head up. There was a little wasting of the muscles of the thumb, and of the biceps and triceps of the right side. The knee-jerks of each side were sharp, and occasionally, on stroking the sole of the left foot, Babinski's sign was found. They also exhibited a case which had been diagnosed as locomotor ataxy. The patient was a young man, 23 years of age, married at 19, the father of two healthy children. There had been no miscarriages. There was a distinct history of congenital lues. About a year ago he got suddenly weak in his left leg, with a pain in his knee. Since then he had had a progressive difficulty in walking. Some two years previously he had "seen double" for a short time. His present condition was that he had not got paralysis of any muscles, but had considerable difficulty in walking, and was very ataxic. Absence of knee-jerks. The pupils contracted neither to accommodation nor light. He appeared to have no loss of sensation in the limbs, but was rather slow in recognizing touches on the left leg, especially from the knee down. He had a certain amount of difficulty in passing water; he often had to press, and sometimes it came away without sufficient warning. He had always been a little deaf. Dr. DRURY exhibited (1) two cases of *Hereditary ataxia*—sisters, aged 11 and 13—in whom the disease had been noticed about three and five years respectively. The younger was the much more advanced case. She stood fairly well with the feet apart, but could not balance at all with her eyes closed. The elder girl had sometimes a slight shaking of the hand, which was only noticeable when watching closely. There was no sensory disturbance, or disturbance of the sphincters. The eye symptoms were variable. In the younger girl there was slight nystagmus, but some days it was absent altogether. In both cases there was a total loss of knee-jerks. The limbs were well nourished. The younger girl showed well-marked lateral curvature, and both feet were getting flat. She had a systolic murmur heard near the apex, and at the base of the heart she had a loud systolic murmur when lying down, which disappeared when she sat up. The day following the observation of the latter murmur it was exactly the reverse—that is, it was absent when lying down and present when erect; it varied from day to day. Her sister had the same. When they came to hospital they were very thin, but they had grown fatter and better in colour after a couple of months on arsenic. (2) A case of *Idiopathic muscular atrophy* in a young man, aged 24. The patient had not noticed anything peculiar about his condition, except that he knew he was not a very powerful person. There was great thinness and want of muscle everywhere. There was no actual atrophy, but he took it that it was still in an early stage. Such cases were usually met with in groups, but there was no history of such in the present case. Although they could not find anything in the way of thoracic disease, still he had extremely marked myoidema. His grasp was feeble, but he had quite well-marked knee-jerks. Dr. T. G. MOORHEAD read a paper on *Grocco's triangle*, giving his observations on the subject for some years past. Dr. KIRKPATRICK said he had looked for the sign during the past two years, and had endeavoured to demonstrate it. He could sometimes demonstrate it to his own satisfaction, but he had often failed to do so to others looking on. It was in cases of small effusion that the sign was of particular value, and it was in such cases that it was very difficult to elicit it. The PRESIDENT said that, short of *post-mortem* evidence, some mystification hung over the subject. It took 10 oz. of fluid to produce recognizable physical signs, and in cases of large effusion the sign was hardly necessary. Dr. MOORHEAD, in reply, said he was an advocate of early removal of fluid, and endeavoured to demonstrate it. In three of the five cases in which he did not get the sign he also demonstrated fluid, but he had not been able to demonstrate the relationship between the size of the triangle and the effusion. Dr. PEACOCKE recorded a case of glioma of the spinal cord in a girl, aged 11.

Reviews.

FRACTURES AND SPRAINS.

SIR WILLIAM BENNETT is the first and chief exponent in this country of the doctrines of Dr. Lucas-Championnière. We welcome the appearance of a fourth edition of his *Lectures on Massage and Early Movement in Fractures*,[1] as evidence of a steadily growing interest in the subject on the part of the medical public. The main part of the book differs little from the third edition, published six years ago, but the number of illustrations is increased, and a chapter on sprains and their consequences, and one on stiffness of the spine, take the place of one on derangements of the knee-joint, which appeared in the earlier editions. There is therefore little to be said of the first two lectures, which have been noticed in former reviews of the book, but on comparing it with Dr. Lucas-Championnière's *Traitement des Fractures par la Massage et la Mobilization*, which was published in 1895, it will be noticed that Sir W. Bennett appears to attach more importance to reduction of fractures, and uses apparatus more than does the originator of the method. Despite this, however, his treatment is essentially the same, in that the apparatus is not applied tightly, and that it is soon and often removed for massage and passive and active movement. The lecture on sprains has already appeared in our pages (December 8th, 1906), and that on stiffness of the spine has also been published before, so that it is not necessary to say much about them on this occasion. The first contains useful hints on the treatment of sprains on the same principles as for fractures; in which latter category the *x* rays have shown that many supposed sprains should be included. In the second lecture the various causes of stiffness are detailed, and the diagnostic value of the symptoms discussed.

Dr. WHITELOCKE has had rather exceptional opportunities of studying sprains and allied injuries of joints[2] in young adults, owing to his position as surgeon to the Radcliffe Infirmary and Lecturer on Surgery at Oxford, where a large number of young men occupy themselves with athletic pursuits, which render them liable to injuries of many kinds. This book deals with many so-called minor injuries, some of which are little understood by the majority of surgeons, and which too often fall into the hands of bonesetters, with results lamentable for the patient, while the few striking cures, which serve only too well to advertise the "professor," are due more to good luck than skill. The scope of this work is wider than its title might lead some to suppose, for it includes many fractures of and in the neighbourhood of joints, as well as sprains and strains of muscles and ligaments. The treatment of internal derangement of the knee-joint and of ankylosis are also included. The author is at one with Dr. Lucas-Championnière in that he relies little upon apparatus, but his experience of massage and early movement in the treatment of fractures and injuries of joints appears to have led him to conclusions very different to those of the distinguished French surgeon. Possibly the difference of opinion is due to Dr. Whitelocke having had to deal mainly with young subjects, and his views are not so directly opposed to those of Dr. Lucas-Championnière as at first sight appears. For the latter has expressly stated that early massage of fractures is not advisable in the case

[1] *Lectures on the Use of Massage and Early Movement in Recent Fractures.* By Sir William H. Bennett, K.C.V.O., F.R.C.S. Fourth edition. London: Longmans, Green, and Co. 1909. (Demy 8vo, pp. 144, with 23 illustrations. 6s.)

[2] *Sprains and Allied Injuries of Joints.* By R. H. Anglin Whitelocke, M.D., M.C., F.R.C.S. Oxford Medical Publications. London: Henry Frowde, and Hodder and Stoughton. 1909. (Demy 8vo, pp. 257. 7s. 6d.

of children, in whom it is apt to produce too exuberant callus; and this tendency to too abundant exudation may continue for as long as the growth of the cartilages persist. Certainly the most striking results of the early massage and movement treatment are to be seen in older patients, who were too often disabled after treatment by prolonged fixation. The author records three cases of fracture of the scaphoid bone of the wrist, in two of which the diagnosis by *x* rays was not made till late, while in the third it was made directly after the injury. Consequently, the two first were treated by massage and movement, while the third was treated by rest. The disability and pain in the first two cases were indefinitely prolonged, while the third patient was as well as ever in six weeks. If we may argue from so small a number of cases, the author's conclusion that in this particular injury rest is the proper treatment, is irresistible. An even more important lesson to be derived from them is the necessity of radiography in the diagnosis of what may seem to be mere sprains of the wrist, and, we may add, of sprains of the fingers also. The descriptions of various unusual sprains and displacements of tendons should be very useful, for these not very common and not very serious injuries are scarcely treated of at all in the formal textbooks of surgery; yet in no cases more than in these does the surgeon stand to gain or lose reputation according as his diagnosis and treatment are right or wrong. We would enter a protest against the recommendation of proprietary preparations, when the same therapeutic effect can be attained without them. This book is well illustrated and printed, like the rest of the series of Oxford medical publications, and it will no doubt have a large sphere of usefulness.

DRUGS AND THE DRUG HABIT.

OF the many books that have been written about drugs it can be said of very few that they possess much interest beyond that concerned with the dry, hard facts with which they deal. Even the still more numerous books which treat of drugs in their therapeutic application seldom arouse any sense of satisfaction from either the literary or philosophic point of view.

A volume recently published by Dr. HARRINGTON SAINSBURY, entitled *Drugs and the Drug Habit*,[3] is a notable exception to this general rule. In his preface, Dr. Sainsbury states that his treatise has for its main object "to look at the essentials of the task which disease sets and drugs undertake, and to discuss with what show of reasonableness the medicaments can claim to be equal to their task." To accomplish his purpose the author wisely avoids multiplicity of details, and by dealing with general principles he presents his readers with a clear and comprehensive view of the position which drugs ought to occupy in their relation to the prevention and treatment of disease, of their influence upon the human mind as well as the body, of the necessity for their adaptation to personal requirements and idiosyncrasy, and finally of their possibilities for evil when allowed to pass from the sphere of use to that of excess.

The first chapter is devoted to an interesting and instructive review of the history of medicine from the earliest mythical times of the immortal gods, down through the days of Aesculapius, Hippocrates, Celsus, Dioscorides, Galen, Paracelsus, Harvey, and Sydenham, to the more recent times of Pasteur, Koch, and Lister. The author then proceeds to develop his subject by pointing out that the objective of drugs is the cure of disease and that therefore, from the widest standpoint, the term "drug" comprises not only the materia medica of the Pharmacopoeia, together with all the more recent serums, vaccines, antitoxins, and organic extracts, but also the psychic effects of hypnotism, and all the various systems of "faith cures." The value of suggestion as an aid to recovery from disease is undoubted, and, consciously or unconsciously, it plays its part in every curative process that is undertaken. As to the ethics of its deliberate employment, Dr. Sainsbury says: "It is a power and it should be used; it is a power and it may be abused; it is there for the honest physician, and it is there also for the charlatan." Unfortunately, it is the weapon against disease which the quack finds most suitable to his methods, and so it is, of all others, that which has been most unscrupulously wielded in the treatment of those who are over-credulous and who, in the feebleness of their individuality, refuse to accept pain as a necessity of human existence, and spend their lives in an insensate attempt to escape, at all costs, every form of discomfort.

But pain drives all men, sooner or later, to seek relief from its tortures, and is mainly responsible for the tyranny of sedative drugs as well as for the popularity of secret quack remedies, and of Christian Science, Faith Healing, and every other fashionable craze which poses as a panacea. Although persistent pain, whether of mind or of body, may provoke the abuse of narcotic drugs, their proper use ought not to be discouraged; the one essential is what Dr. Sainsbury calls their *controlled* administration. When anodynes are thus employed,

> drug treatment, instead of degrading the moral sense, may actually become a means of building it up; for the patient who accepts the restrictions as to the use of the palliative, and is willing to bear himself resignedly until the time appointed for relief, is actually submitting to a form of discipline which may tax to the uttermost his powers of endurance, and which if endured cannot fail to strengthen his moral fibre.

Without the saving grace of control, the risk from the continued use of all drugs, but especially of those which are sedative or stimulating in their effect, is the creation of a habit, and one of the most pernicious characteristics of the drug habit is the need which it engenders for increasing dosage. It is pointed out by Dr. Sainsbury that the persistent administration of a drug under certain circumstances—as, for instance, in the case of such a disease as myxoedema—is a beneficent habit; but habit becomes injurious when it is created and indulged under such conditions as to render its relation to the welfare of the economy evil. He says:

> To regard the question of habit and control alike, now when Life touches its zenith, and now when it is within sight of harbour, is not to follow the dictates of reason. Sometimes in the midst of seeming health, in the full tide of things, the warning comes that we must make ready for departure, as when a cancer declares itself; and not to take into account this new fact and make due allowance is to prove ourselves unskilful mariners. Habit is not to be made into a bogey, neither is control to be made into a fetish. Life always will run betwixt its Scylla and Charybdis; it is meant so to run; that is why the helm is put into our hands to guide. It is meant that we should have the opportunities to show ourselves courageous and prudent steersmen, but these opportunities the great waters only can give. If for fear of establishing a habit through misuse we forego the benefits which are here to our hand for use, we shall inevitably limit the scope of life, and so narrow its outlook and cramp its purpose.

In a chapter devoted to the uncontrolled habit, detailed consideration is given to the leading sedative and stimulant drugs which furnish the most striking examples of habituation, and especially to opium and its derivatives, and to alcohol. The author's views will well repay the careful attention of all who devote attention to the great sociological problems which have arisen out of the widespread custom of careless recourse to, as well as out of the unhappy prevalence of excessive addiction to, these potent and popular indulgences.

Passing finally to the question of prevention and cure as they apply to injurious drug habits, Dr. Sainsbury contends that there is need for greater regard to the new science of eugenics, for the more careful education of the child both by precept and example, and for the assistance of the State to secure a proper quality of food and a standard purity of medicine, and of such other articles of daily consumption as tea, coffee, and alcohol. As regards alcohol, a wise word of warning is given to the extremist when he is reminded "that temperance promises a higher moral yield than total abstinence; that the aim of all education should be to develop character, to create a people strong willed for good; that it is possible to pay too high a price for sobriety, and that this excessive price is paid when liberty of action is forfeited."

Enough has been said to indicate the scope and merit of Dr. Harrington Sainsbury's book. We congratulate him upon the production of a treatise which for breadth of view, temperance of exposition, simplicity and clearness of style, deserves to be carefully read, not only by members of his own profession, but by all to whom the public weal and the betterment of the race are questions of interest.

[3] *Drugs and the Drug Habit.* By Harrington Sainsbury, M.D., F.R.C.P., Senior Physician to the Royal Free Hospital; Consulting Physician to the City of London Hospital for Diseases of the Chest (The New Library of Medicine). London: Methuen and Co. 1909. Demy 8vo, pp. 321; illustrations 11. 7s. 6d.)

OBSTETRICS.

WE noticed the second section of the *Edinburgh Stereoscopic Atlas of Obstetrics*[4] in our issue for August 29th of last year. The third section consists of twenty-five further stereoscopic photographs, illustrating the delivery of the child and placenta, the application of forceps, the diameters of the fetal head, and Walcher's position. The student who uses these diagrams has at least the satisfaction of knowing that what he looks at is a faithful representation of Nature. We may be permitted to cavil at two small points: There is a photograph of a fetal head, and the suboccipito-bregmatic diameter is marked, and defined as being a line drawn from midway between the foramen magnum and the occipital protuberance to the anterior fontanelle. This diameter, so defined, is of no importance obstetrically. It cannot be measured in the living child because the foramen magnum cannot be felt. The measurement in the sagittal plane that *is* important is the largest diameter that has to pass the vulva and stretch the perineum, and this is the suboccipito-frontal, and should be defined as the measurement between the nape of the neck and the most distant point of the frontal suture. This point may or may not be the anterior fontanelle. The other point is that restitution and external rotation are described as the same thing. If so, why use two names? The difference between them used to be clearly defined by Matthews Duncan. Restitution is the restoring of the head to its natural relation to the shoulders—the undoing of the slight twist of the neck which brought the head into the antero-posterior diameter while the shoulders were in the oblique diameter of the pelvis. External rotation is this movement carried further by the rotation of the shoulders into the antero-posterior diameter. This may be a trifle, but it is well that words should be used accurately. The student who looks carefully through this *Atlas* will learn a great deal. The fourth section, which completes the work, illustrates transverse and face presentations, placenta praevia, accidental haemorrhage, retained placenta, Caesarean section, pendulous belly, inversion of the uterus, and some of the instruments used in midwifery. The text is descriptive only, and of an elementary kind. In the section on rupture of the uterus we should like to have seen it more clearly insisted on that the obstacle to reduction is the contracted os internum, and the necessary condition for reposition is the dilatation of the os internum. The *Atlas* is not a substitute for a textbook on midwifery, but only an aid to impressing things on the reader's memory. We congratulate the editors on the completion of their work, which we hope a wide circle of readers may find helpful.

Until the present time, Professor FEHLING remarks in the preface to his book on operative midwifery, there has been only one kind of midwifery. But unfortunately, he says, there is growing a kind of surgical midwifery different from that of private practice. The object of his book[5] is to show the general practitioner how far he may go, and when he should send his patient to the hospital. At present it is necessary, in the interest of the patient, to draw this line. It will be the object of the future so to train students that they may be masters of the whole field. In the first chapter of the book, which relates to antiseptics, the author shows himself a Listerian of the most pronounced Continental type, and between his hospital observances and the practice of the ordinary general practitioner there certainly is a difference, or at least we should have thought so. Does the German doctor attending a working man's wife in her labour wash and scrub his hands for ten minutes by the clock, and then put on indiarubber gloves? Medical fees are not high in Germany, and we should not be surprised to learn that the expense of indiarubber gloves, both by reason of their cost and their fragility, prohibited their use in private practice. The book is a series of clinical lectures. It does not profess to be exhaustive, but it is clear and practical, and we presume fairly represents German practice. Like many of his brethren, Professor Fehling does not know the best way of decapitating. He advises the clumsy instrument of Braun, by which the cervical vertebrae can be fractured, leaving the soft parts to be cut through with scissors. If he were acquainted with Ramsbotham's sharp hook, he would not have recommended anything else. He describes the axis-traction forceps, but does not advise its use, for the reason that continuous pressure on the child's head is not good. He does not know how easy an operation subcutaneous symphysiotomy is. He describes "pubitomie" (*sic*), an operation which we cannot imagine a general practitioner with only average surgical skill and experience undertaking. Nor can we think that vaginal Caesarean section is a general practitioner's resource. Professor Fehling mentions as an indication for this operation persistent retroflexion of the gravid uterus; not knowing, apparently, that in every such case that has been let alone natural delivery has taken place. The work is no doubt a good textbook for the average German student. Perhaps we are the subjects of insular prejudice when we say that we think there are better textbooks published in our own language.

The title of the book, *Das Auge des Geburtshelfers*,[6] is metaphorical. Professor SELLHEIM explains that the eye of the midwife (male or female) is, when practising that department of surgery, at the tip of the forefinger. The work consists of two parts. The first is a brief summary of the physiology of sensation. It is not up to date, for the author has apparently not heard of the great work done by Head, with the assistance of Sherren and Theodore Thompson. Dr. Sellheim is aware that there are different kinds of sensation—as for light contact, deep pressure, heat and cold, etc.—but he has not attained to the meaning of "protopathic" and "epicritic" sensibility. The second part is an account of what an educated finger ought to be able to feel in the pelvis, and advice as to how a practitioner of midwifery should educate his sense of touch, and record observations made by that faculty. The student, the author points out, when he begins the study of midwifery, enters a new world, in which the sense of touch replaces that of sight. The trend of the work is to inculcate care, thoroughness, and accuracy. Its influence upon those who study it cannot but be good. It aims at forming sound methods rather than imparting information. It is laudable but limited.

The large sale of *Aids to Obstetrics*[7] shows that it has been popular, and in its conciseness and clearness we discern the reasons for its popularity. For the present edition Dr. Nall, the original author, disclaims responsibility. Dr. LONGRIDGE has revised the book. There are a few things which we take to be errors, and we feel bound to point them out. At p. 132 the reader is told that "version or Caesarean section" is recommended for persistent retroversion of the gravid uterus. He should have been informed that natural delivery has taken place in every case that has not been interfered with. For placenta praevia, Caesarean section is said to be "good treatment." The latest collection of results that we know of—that of Dr. Munro Kerr, published in 1904—shows an average mortality for this operation, when performed by the best operators and in the best hospitals in Europe, of 8 per cent. The mortality among cases treated according to the precepts of Braxton Hicks is less than half this. At p. 163 the author has copied from old books a recommendation to divide the neck by a piece of whipcord. He says not whether he has tried it, but we trow not, for he tells not how many hours it takes. Such an archaic futility and as an alternative to Ramsbotham's sharp hook on the same page, is a deplorable waste of space in a small book like this. But on the whole the revision has been well done.

[4] *The Edinburgh Stereoscopic Atlas of Obstetrics.* Edited by G. F. Barbour Simpson and E. Burnet. Sections III and IV. London: The Caxton Publishing Company. 1908. (Cr. 4to; 25 subjects; 4 parts. 84s.)

[5] *Die operative Geburtshilfe der Praxis und Klinik.* In Zwanzig Vorträgen. Von Dr. Hermann Fehling, Ord. Professor der Geburtshilfe und Gynäkologie, Direktor der Kaiserl. Universitäts Frauen Klinik zu Strassburg im Els. Wiesbaden: J. F. Bergmann; Glasgow: F. Bauermeister. 1908. (Roy. 8vo, pp. 198 77 Abbildungen. 4s.)

[6] *Das Auge des Geburtshelfers:* eine Studie über die Beziehungen des Tastsinnes zum geburtshilflich-gynäkologischen Fühlen. Von Hugo Sellheim, o ö. Professor der Geburtshilfe und Gynäkologie an der Universität Tübingen. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1908. (Sup. roy. 8vo, pp. 67. 1s. 10d.)

[7] *Aids to Obstetrics.* By Samuel Nall, B.A., M.B.Cantab., M.R.C.P.Lond. Revised by C. J. Nepean Longridge, M.D.Vict., F.R.C.S.Eng., M.R.C.P.Lond., Pathologist and Registrar at Queen Charlotte's Lying-in Hospital, Examiner to the Central Midwives Board, Lecturer on Midwifery for the London County Council. Twenty-fifth thousand. Seventh edition. London: Baillière, Tindall, and Cox. 1909. (Fcap. 8vo, pp. 201. 2s. 6d.)

THE ROENTGEN RAYS IN DIAGNOSIS AND TREATMENT.

The fact that the leading exponents of *x*-ray practice are also the most careful to point out its inevitable limitations is suggested by the appearance of Dr. Arnsperger's substantial volume on the Roentgen examination of the organs of the chest and its results in physiology and pathology.[8] The author, who was a pupil of William Erb, aims to bring the radiological method into harmony with the other diagnostic methods, rather than to assert its independence and self-sufficiency. The idea that these other methods are superfluous is, he says, a danger to straightforward *x*-ray procedure. Having thus given the keynote of the book, its scope may be indicated by saying that it is really a sort of guide-book to the perplexing *x*-ray shadows of the chest. Technical preliminaries occupy the author scarcely at all; for these he refers the reader to other textbooks. Confining himself to the medical side of the question, he takes the scientific line of examining in the first place the normal thorax, and then devotes the larger portion of the volume to a critical review of the changes to be noted in injury and disease. All kinds of abnormal conditions are treated in turn, from cervical ribs to mediastinal tumours, but the interest centres in the lengthy section dealing with the localization of the shadows in phthisis. Dr. Arnsperger is sceptical as to the value of Williams's phenomenon, and states that he has found the diminished excursion of the diaphragm an early symptom in only 6 per cent. of his cases. In his opinion pleuritic adhesions, which are often absent in early tuberculous cases, are generally the cause of this limitation of movement. With regard to apical appearances he reiterates his former statement that the shadows seen in the diseased apex during deep inspiration sometimes become darker instead of lighting up. Enlargement and caseation of the bronchial glands he believes to be only a secondary and somewhat uncertain feature in early diagnosis. Very frequently remains of glandular swellings left from childhood cause confusion in a radiological examination. On the whole question he affirms that while the *x* rays furnish a very good idea of the extent of the tuberculous process and of its infiltrated, cirrhotic, or cavernous character, they fail to give the evidence upon which to form a decision as to the clinical importance of the visible variations. It cannot be stated with certainty whether what is seen in an *x*-ray picture is a fresh process or an old scar. A number of radiograms are given in the appendix, but the author considers that the physiological movements produce so many different appearances that, in spite of improvements in technique on the photographic side, the screen examination is still to be preferred. Nevertheless, there are requirements, such as the detection of isolated tubercle, when the radiogram may be of more value than the screen. On the other hand, in considering the size of the heart, the single screen examination is open to many sources of error, and here comes in the use of the orthodiagraph. The absence of any index to such an elaborate work is a serious omission.

So noteworthy have been recent *x*-ray developments that Dr. H. E. Schmidt has found it necessary to issue a second and augmented edition of his compendium of Roentgen-therapy,[9] which was first published in 1904. One third of this concise treatise is devoted to the technique of interrupter, tube, dosimeter, etc., favourable mention being made of the newest dosimetric method of Schwarz. The author then discusses at length the indications for *x*-ray treatment in many dermatological and other conditions, including syphilis, in which he has found the tertiary ulceration yield to this therapy. An important chapter treats of the three forms of *x*-ray dermatitis, distinction being made between the erythema, skin atrophy with warty proliferation, and the sclerodermic condition with impeded movement of the muscles. He points out that the degree of sensitiveness differs with individuals and bears some relation to the general nutrition. In dealing with *x*-ray injuries from the forensic standpoint, he says that cases of serious mischief to patients are now rare, but the possibility, particularly of testicular injuries to youths, needs to be borne in mind. He has been called as an expert in cases in which indemnification was demanded, and his list of precautions, the neglect of which most commonly gives rise to the allegations of malpractice, is instructive. The book will be useful to those who follow German details of technique and treatment.

[8] *Die Röntgenuntersuchung der Brustorgane und ihre Ergebnisse für Physiologie und Pathologie.* Von Privatdozent Dr. Hans Arnsperger. Leipzig: F. C. W. Vogel. 1909. (Roy. 8vo, pp. 271, 34 figures in text and 27 plates. M. 12.)

[9] *Kompendium der Röntgen-Therapie.* Von Dr. H. E. Schmidt. Second edition. Berlin: August Hirschwald. 1909. (Post 8vo, pp. 164; 36 figures. M.3.)

NOTES ON BOOKS.

All medical men who contemplate "taking a ship" for the first time would be well advised in procuring a copy of Mr. J. F. Elliott's excellent little volume *Hints to Ship's Surgeons.*[10] It can be read in an hour, and gives an immense amount of information of a practical kind. The young medical man who "signs on" for the first time, is almost necessarily ignorant to a large extent of some of the conditions under which he is about to practise his profession. This little book will inform him as to his relations to the Board of Trade, the owners of his vessel, the passengers, his fellow officers, and the crew. Incidentally it will warn him against many mistakes that would be the natural outcome of inexperience, and provide him with much useful advice as to treatment under the peculiar conditions that prevail aboard ship.

The fifteenth edition of *Chavasse's Advice to a Wife*[11] will fully maintain the reputation which has been won by its predecessors. As far as the medical advice given the book is quite modernized, and seems to contain all that a married woman ought to know without interfering with the proper function of the medical attendant. As several generations of mothers have now been trained on this book the language might be a little modernized also, and what the present editor calls the "chatty style" of the original author might be modified to suit the taste of the present generation. At least we would plead for the substitution of the word "woman" for "lady" in discussions of female sexual functions. The latter word in such a connexion smacks of a kind of early Victorian "delicacy" which has become almost indecent to a modern ear.

The Territorial Year Book[12] contains a great deal of information about the Territorial Force and other matters likely to interest Territorials. It begins by reviewing the work of the past year, including the progress of the force and its developments, the changes and improvements in the medical department being specially noted. Details of how to enlist, dress, pay and allowances, training and instruction, and peace and war establishments, are then given, as well as particulars of the territorial divisions and brigades in the various districts and commands. Several pages are taken up with hints for camp and manœuvres, and will be found of particular value to recruits. These are followed by hints on health and first aid, and if all men would follow the advice given there would be a good deal less of the minor ailments which are so frequent in camp and interfere with efficient training. Veterinary hints are not forgotten, and here again details are given, and, if studied by those mounted men who in civil life have not much to do with horses, will enable them to do their work more expeditiously and with greater advantage to themselves and the animals. We may add that a list of books, official and unofficial, and their prices is given, and will be found specially useful to officers or men desiring to make themselves proficient in technical subjects.

The second German edition of the work on tuberculosis by Drs. Bandelier and Roepke was reviewed in our issue of November 14th last, p. 1501; it was then said that the book might be warmly recommended to the attention of all who have to treat tuberculosis in any of its forms, and readers will be glad to know that Dr. Egbert C. Morland has made a translation into English of this edition, which is published under the title *Tuberculin in Diagnosis and Treatment.*[13]

[10] *Hints to Ship's Surgeons.* By J. F. Elliott, L.R.C.S., L.R.C.P.I. London: John Bale, Sons, and Danielsson, Ltd. 1908. (Cr. 8vo, pp. 64. 2s.)

[11] *Chavasse's Advice to a Wife on the Management of her own Health and on the Treatment of some of the Complaints incidental to Pregnancy, Labour, and Suckling.* Fifteenth edition. Revised by G. D. Robinson, M.D., B.S., F.R.C.P. London: J. and A. Churchill. 1909. (Cr. 8vo, pp. 368. 2s. 6d.)

[12] *The Territorial Year Book, 1909.* London: Hodder and Stoughton. (Cr. 8vo, pp. 304, 9 maps and diagrams. 1s.)

[13] *Tuberculin in Diagnosis and Treatment.* By Drs. Bandelier and Roepke. Translated from the second German edition by Egbert C. Morland, M.B., B.Sc.Lond., M.D.Berne. London: John Bale, Sons, and Danielsson, Limited. 1909. (Roy. 8vo, pp. 190. 7s. 6d.)

The latest volume of the *Transactions of the American Laryngological Association* covers the proceedings of that body at its meeting last year, when the Association visited Montreal. Among the thirty-eight papers read were a series of three dealing with sinus disease, and another series of four which served as an introduction to an interesting discussion on recurrent and abductor paralysis of the larynx. The volume also supplies an index (names and subjects) to all papers which have been read before the society during the past ten years. The president at the meeting was Dr. Birkett, parts of whose interesting account of the history of medicine in the Province of Quebec between the years 1535 and 1838, have already been quoted in our Literary Notes.

It is impossible when the fetish of examination prevails to criticize unfavourably any book which accurately represents, however briefly, the facts which an unfortunate examinee has to produce for the ordeal. We can say this of Dr. MURRELL'S *Aids to Forensic Medicine*[14] that they do present accurately the facts required for the above purpose; and probably the author himself will think that this is all that the "Aids" series requires; but we would like to add that Dr. Murrell possesses a faculty of expressing these facts in language pleasant to read, and that does not irritate by its style. The fact that the book has passed through six editions proves conclusively that it is found useful by those for whom it is written.

PHYSIOLOGICAL CHEMISTRY.

Hoppe-Seyler's name is still one to conjure with, and is rightly preserved both in the journal which he founded and in the book by which he is best known. At the time when he began his work his was the only handbook of physiological and pathological chemical analysis[15] in Germany. At the present time the number is so great that teachers and students alike have a difficulty in making a selection. It is almost six years since Professor THIERFELDER edited the seventh edition, and in this time the changes in the science have been so sweeping that the book has had almost to be rewritten. As a practical laboratory guide it is, in our opinion, easily first, and we wish it continued success.

Professor HAWK has rewritten a good deal of his textbook, so as to bring it up to date, and in so doing has much improved it.[16] The work still possesses some disadvantages as a guide for practical classes to which we referred in our review of the first edition. These relate mainly to matters of arrangement. The book, however, is extremely good and very complete. A special feature in it is the wealth and beauty of the illustrations. No properly equipped labooratory or library can afford to be without it.

CLINICAL THERAPEUTICS.

A textbook on clinical therapeutics[17] which has achieved the distinction of a fifth edition needs but little introduction, and Dr. LEMOINE'S is essentially businesslike in its method of classification. An outline of the characteristic clinical features of each malady, followed by a summary of the symptoms which it produces, leads up to an account of the therapeutic measures, arranged under special headings. The instructions thus given are of necessity somewhat dogmatic, but on testing their accuracy and scope in some of the less common diseases we can commend them as trustworthy and fairly comprehensive. Vaccine treatment does not as yet seem to have found much favour in France, and radio-therapy is still in the experimental stage. Tuberculous disease is to be treated on hygienic and symptomatic lines only, no mention being made of the relative merits of serums or tuberculins. The whole work forms a handsome volume, written in very easy French, which has attained to its present proportions by successive stages from the very elementary book which first saw the light in 1896. A fuller index would add to its value as a work of easy reference, and still further justify its title to be a guide to everyday medicine.

[14] *Aids to Forensic Medicine and Toxicology.* By W. Murrell, M.D., F.R.C.P. Seventh edition. London: Baillière, Tindall and Cox. 1909. (Fcap. 8vo, pp. 133. 2s. 6d.)

[15] *Felix Hoppe-Seyler's Handbuch der physiologisch und pathologisch Chemischen Analyse für Aerzte und Studierende.* Bearbeitet von Dr. H. Thierfelder. 8te Auflage. Berlin: A. Hirschwald. 1909. (Cr. 4to, pp. 874. Fig. 19, Taf. 1. M 22.)

[16] *Practical Physiological Chemistry.* By Philip B. Hawk, M.S., Ph.D., Professor of Physiological Chemistry in the University of Illinois. Second Edition. London: J. and A. Churchill. 1909. (Roy. 8vo, pp. 463, 126 figures in text, and 2 plates of absorption spectra. 16s.)

[17] *Thérapeutique Médicale et Médecine Journalière.* By Dr. G. Lemoine Professor of Clinical Medicine at Lille. Fifth edition. Paris: Vigot Frères. 1909. (Roy. 8vo, pp. 1,128. Fr. 16.)

In the preface to his pocket-book of therapeutics,[18] Dr. SCHNIRER explains that an earlier edition has received the flattery of plagiarism, which has been stopped by process of law. It is a little difficult to say whether this is mentioned by way of complaint or boast. For the rest the booklet contains a miscellany of prescriptions, sound enough in a sense, and very similar to those contained in various English works of the same sort. But this kind of potted therapeutics is open to grave objection, in whatever language it may be written.

MISCELLANEA.

The story of *Sir Guy and Lady Rannard*, by H. M. DICKINSON,[19] is that of a millionaire madman and his wife. Regarded as an ordinary novel, perhaps, its interest lies chiefly in the picture painted of a woman who, marrying from ambition, begins to love her husband when she finds he needs her care. It is prolix in parts, but in the description of the skill and courage with which the wife endeavours to conceal her husband's mental state there is a decidedly truthful touch. There is skill, too, in the description of the development of the hero's insanity, though to the end most medical readers will remain in doubt as to the precise nature of his malady. Probably they will conclude that the author has had under observation cases both of volitional insanity and of general paralysis of the insane, and has confused their symptoms.

The play by Mr. ST. JOHN HANKIN,[20] named *The Last of the de Mullins*, is a clever impressionist sketch of a very old situation. Failing the arrival of a conventional festa, the heroine thinks it more sensible to eat her cake with a chance partner than let it mould in the cupboard. The usual fit of indigestion follows, but for this she refuses to accept either pity or forgiveness, deeming neither needed.

[18] *Taschenbuch der Therapie.* Von Dr. M. T. Schnirer. Würzburg: A. Stuber's Verlag. 1909. (Dbl. demy 32mo, pp. 394. M.2.)

[19] London: W. Heinemann and Co.

[20] London: A. E. Fifield. 1s. 6d. net.

MEDICAL AND SURGICAL APPLIANCES.

A Suture Needle.

DR. G. H. PEAKE (Medical Mission, Fianarantsoa, Madagascar) has designed a suture needle which he has found useful in passing deep sutures in operations in the pelvis when, owing to the presence of the tumour or adhesions, there has not been room to secure easily the thread in the ordinary suture needle. The head of this needle, with the suture, can be seized with an ordinary pair of artery forceps, guided to it by the finger. The shaft is then easily withdrawn, the needle-head pulled up, and liberated by division of the suture; a double ligature is thus left under the structure to be tied. The extra needle-head, supplied with the handle, can be kept ready threaded in the instrument tray. The needle is made by the Holborn Surgical Instrument Company, Limited, Thavies Inn, Holborn Circus, London, E.C.

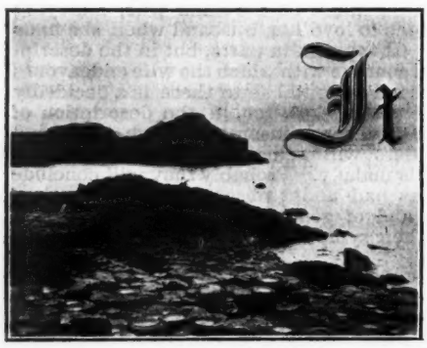
A Urine Collecting Bottle.

The annexed engraving shows a bottle which Messrs. Hewlett and Son, of Charlotte Street, E.C., are now making under the name of the "Handy Collecting Bottle." It is intended to facilitate the collection of samples of urine from ordinary receptacles, and seems well suited to its purpose. It holds some 4 oz., and on its external surface has a roughened space on which the name of the patient can be written either in pen or in pencil. It is easy to clean, and its indiarubber stopper fits so well that when the bottle has been placed in the tin case, shown alongside it, it can be carried in the pocket without risk of leakage. Its price, bottle and container together, is 2s. 6d., extra bottles costing 1s. 6d. each.

SEVENTY-SEVENTH ANNUAL MEETING
OF THE
British Medical Association.
AT BELFAST, JULY, 1909.

SPORT AND TOURING IN IRELAND.

[FROM AN IRISH CORRESPONDENT.]



The Giant's Causeway.

It may be taken for granted that the great majority of members attending the Annual Meeting of the Association in Belfast will spend a few days or weeks exploring some of the many beautiful districts in Ireland, or taking advantage of the facilities that country offers for sport in one or another form. It is the aim of this article to give some help to such members, and assist them in choosing what will best suit their tastes. When the choice is made, help in obtaining it will be given through the Honorary Local Secretaries, either by correspondence beforehand, or during the meeting.

First it should be said that, though Ireland is not a large country, neither is it one in which travel is rapid as a rule, so that, except for the motorist, it is a mistake to try to see the whole country on one visit. Dublin and Killarney may certainly be combined with Belfast, the Giant's Causeway, and Donegal in one trip, but unless one has had the fortune to be born under the Stars and Stripes, such a trip is likely to prove more exhausting than satisfying. The first piece of advice, then, is to choose a short tour and not hurry over it. As regards time, those who can arrange to take their holidays in July, before the meeting, are sure to have the best of it, for they get the long evenings, less crowded hotels and trains, and greater likelihood of fine weather. The last point leads to the remark that Irish weather has been greatly maligned, for though it rains often it seldom rains for long, and the sudden change from a dull and wet morning to a brilliant sunny afternoon among the Donegal or Kerry hills is a thing to be remembered for a lifetime.

An Antrim Trout Stream.

MOTORING.

Some hints on motoring in Ireland may be of use to those members who think of taking over their cars. Irish roads, speaking generally, are rough, and a low-powered light car is the most suitable for them—say a car of 16 h.p. weighing not much more than a ton. There is a common tariff for cars on the cross-channel steamers, amounting to 30s. a car up to 10 cwt., and 1s. a cwt. over 10 cwt., owner's risk, or 25 per cent. extra at company's risk. The cars are well cared for on the journey.

Through Ireland generally the facilities for repairs and for obtaining supplies of petrol are quite good, and the hotels are accustomed to house cars. It is well to remember the frequent occurrence of hog-backed bridges and culverts, which render fast going dangerous, especially for a heavy car. As has been said above, Ireland is a small country, and it is possible to see a great deal of it in a fortnight's motoring. One might begin at Dublin, go by Killarney and round the coasts of Kerry and Clare to Galway, then through Connemara to Achill, by Sligo to Bundoran, and round the coasts of Donegal and Antrim to Belfast. But a far more enjoyable holiday will be spent if the trip is shortened, and taken easily, exploring some of the hills and valleys on foot. Innumerable side trips may be made, too, off the main route suggested, and one which the writer thinks quite unequalled in the British Isles is down the Dingle Peninsula from Tralee, co. Kerry, over Connor Hill Pass, and round Slea Head, the most westerly point of Europe. Given a fine clear day, the views of sea, island, and mountain are magnificent.

EXCURSIONS FROM BELFAST.

Three excursions have been arranged for the Saturday after the meeting: (1) To the Giant's Causeway, (2) to Glenariffe and round the Antrim Coast to Larne, (3) to Newcastle and round the co. Down coast to Warrenpoint.

The Giant's Causeway. This excursion, which will no doubt be the most popular of those on Saturday, will take the visitor from one end of co. Antrim to the other, through a picturesque stretch of country, chiefly agricultural, but very different from English agricultural districts. The small fields, thatched and whitewashed farmhouses, occasional bogs, and frequent streams, are all typical of Irish scenery.

For the first few miles the line runs down the north shore of Belfast Lough, then reverses its direction and ascends the Antrim plateau, on which it keeps most of the

way to its terminus at Portrush. Just after leaving Antrim station a glimpse is got on the right hand side of the line of a very fine round tower, one of the most perfect of these interesting and puzzling remains of prehistoric Ireland. Halfway to Portrush a stop is made at Ballymena, where the line to Glenariffe, the second excursion, diverges to the right. Ballymena is a flourishing little market town, and the station, a model of neatness and convenience, is worth noticing. Soon after leaving it a real Irish bog on the right side of the line is passed. Piles of turf or peat are seen drying, and the bog is scored by the long dark lines of cuttings from which it has been taken. At Coleraine the main line goes off to the left to Londonderry, and a glimpse is got on the left of the Bann, a fine salmon river, which drains Lough Neagh. Then almost immediately the Atlantic Ocean is sighted, with Malin Head, the most northerly point of Ireland, running into it in the north-west. At Portrush, which it is correct to refer to as "the Brighton of the North," the electric tram is taken to the Causeway, eight miles off. The run is a splendid one—first through the links of the Royal Portrush Golf Club, and then along the cliffs with superb sea and rock views. A glimpse is got of Dunluce Castle, for centuries the stronghold of the Macdonnells. After passing the little town of Bushmills, chiefly famous for whisky, the line passes over the river Bush, a fine salmon river, and shortly reaches its terminus, whence it is twenty minutes' walk down to the Causeway. There guides can be had who will expatiate till further notice on the geology, mythology, or theology of the district, according to the taste of the visitor. But after satisfying one's curiosity on the actual Causeway the visitor ought to do one of two things—either take a boat, if it is a fine and calm day, and visit the caves, or else walk round the cliff path, where the most glorious views of sea and headland are obtained, varying at every turn. The return journey will be made to Belfast by the same route.

Excursion to Parkmore and Glenariffe.

Parkmore, reached from Ballymena, on the line to Portrush, by a narrow-gauge line, is the highest station in Ireland, being about 1,000 ft. above the sea. It is on the edge of the Antrim plateau, at the head of Glenariffe, one of the most beautiful of the glens of Antrim. These glens are valleys cut deep into the plateau, and running down to the sea on the east side of the county. The head of Glenariffe is actually a gorge, worn by the water in the rock, in which the stream forms some fine waterfalls, well worth seeing. After walking down the glen for about two miles the road is rejoined and the drive continued to the foot of the glen, 6 miles away, then round the splendid coast road 25 miles to Larne, stopping on the way to lunch at Garron Tower, built by one of the Londonderry family, and now an hotel. It is very beautifully situated on a height overlooking the channel and the Scottish coast, which at one point, a little to the north of this, is only 11 miles distant from the coast of Ireland. After lunch the drive will be resumed to Larne, whence train is taken 24 miles to Belfast.

The County Down Coast.

This excursion will appeal specially to those who enjoy mountain scenery, for the road from Newcastle to Warrenpoint lies round the base of the Mourne Mountains, the highest hills in Ulster. Slieve Donard, overlooking Newcastle, is 2,796 ft. high, and many of the others are not much less. As they rise steeply from the sea they show their height well, and, being a mass of granite, are singularly fine in outline.

Newcastle is reached in about an hour by express train from Belfast, the journey being through the good agricultural districts of County Down, and very picturesque. The district is one of the most prosperous in Ireland, a stronghold of the Ulster Scot. After passing the little town of Downpatrick, with a cathedral under whose shadow St. Patrick lies buried, the line enters rougher country, and approaches the sea at Dundrum Bay. Just before Newcastle is reached the golf links of the Royal County Down Golf Club are seen on the left side. It is on these fine links that the Belfast Cup, described in another column, will for the first time be played for on Friday, July 30th. From Newcastle the road to Warrenpoint, a distance of twenty-four miles, will be taken; it runs between the mountains and the sea, with fine views on every side. Near Warrenpoint it passes through Rostrevor, the favourite health resort of Ulster when a mild and sheltered situation is desired. Warrenpoint lies on the shores of the beautiful Carlingford Lough, and is the terminus of a branch of the Great Northern Railway. After dinner there the train will be taken back to Belfast.

On the Links, Newcastle. Mourne Mountains in distance.

FISHING.

In the short space at disposal it is impossible to deal with angling in Ireland generally, and the following

remarks are confined to districts easily reached from Belfast, and worth visiting about the time of the Annual Meeting. This is not the best time of year for angling, but it is by no means the worst, and it is often quite good if the weather is favourable. It is hardly necessary to say that the best angling must be paid for, but nevertheless really good sport, both salmon and trout fishing, may be had free at many hotels which have acquired the angling rights in their districts, and the charges at these hotels are generally very moderate compared with those usual in Scotland. Wherever the visitor fishes, he must take the £1 Government licence to angle for salmon or sea trout, or rather must take the licence within twenty-four hours of landing his first fish.

The Royal County Down Golf Club. Club House and Slieve Donard Hotel, Newcastle, County Down.

The Bann.

The river Bann, flowing north from Lough Neagh to the Atlantic, offers good salmon fishing in July. About the best to be had by a stray visitor would be got by going to the Mercer's Arms, at Kilrea, co. Derry, where the angling ticket costs about £1 a week, and a man and boat 5s. a day, with lunch for the man. There are some trout to be had here also, large fish, and the dry-fly fisherman has good chances. Early in August the prospects are equally good, provided the flax water is not down early. The pollution of the rivers by the water in which flax has been soaked is the curse of angling in north-eastern Ireland, for the fish are poisoned by it, and if not killed outright are too sick to rise. Portglenone, co. Antrim, is another good centre on the Bann. Accommodation may be had at a comfortable inn.

Cushendall.

At Cushendall, on the Antrim coast, free fishing may be had in several streams, with plenty of small brown trout. It is a delightful and picturesque district, suitable for a visitor who wants to explore the country, and only takes out his rod on a showery day.

A Newcastle Bunker.

County Donegal.

In County Donegal first-class fishing may be had at various places. Beginning in the north of the country, at Churchill, on Gartan Lough, small brown trout are plentiful, and in the Lennon river (free) there is a good chance of a salmon after a flood. At Rosapenna, which is noticed more at length under the head of golf, below, there is good fishing attached to the hotel up to the end of July, but after that date it is reserved by Lady Leitrim. Gweedore, on the west coast, is probably the best place for salmon, but as the rods are limited it is necessary to apply early (the Manager, Gweedore Hotel, co. Donegal). The charge to visitors in the hotel for angling for salmon is 10s. a day. The river is heavily stocked, but needs a flood to make it fishable. The fish run small—about 7 lb.—and sea trout are plentiful. In the lakes, which are close by, are plenty of small brown trout, and on a good day one is likely to get some sea trout also. The gillie on the river receives 2s. 6d. a day and lunch, and rows the angler on the lake if he fishes it.

Dungloe is the centre for the Rosses fishery, best for sea trout, with the chance of a salmon. It is a dull place to stay at, with no resources except angling. Terms can be had from Mr. Hanlon, Dungloe.

Ardara is the centre for the Owenea and Owentocker rivers; the former is a good salmon and sea trout river (7s. 6d. per day), and the latter brown trout. Carrick offers good fishing — salmon, sea and brown trout— in two rivers free to visitors in the Glencolumkille Hotel. It is a picturesque spot, and a good centre for excursions.

The river Erne, at Beleek or Ballyshannon, is among the best angling rivers of the kingdom, but the number of rods is limited, and generally all places are engaged months beforehand. The charge is five guineas a week, with 5s. a day and lunch to the gillie, and two fish a week are allowed to the angler. It is necessary to wade deep; the dry-fly fishing for trout is excellent, specially early in the season, and it is not expensive. (For full particulars write to the Manager, Erne Fishery, Beleek, co. Donegal.)

Lough Melvin, at the extreme south of the county, may be fished either from Bundoran, where there is a most comfortable railway hotel, and good golf links, but a rough drive to the Lough, or from Garrison, which is more primitive, but quite comfortable, and has the advantage of being on the Lough. The trout fishing is free; the angler pays 5s. a day for a boat and two men, and gives the men lunch. The fishing is most interesting, as not only Ferox, but the beautiful Gillaroo trout (with so-called gizzard), and the rare black-fin trout, locally called Sonaghan, may be got.

Single Days.

Plenty of single day angling excursions may be had from Belfast, but the choice should depend on the local weather conditions, and cannot be made long beforehand. Any member wanting such an excursion during the meeting should apply to the Honorary Local Secretaries, who will put him in communication with an angling member ready to help.

GOLF.

The choice which lies before a golfing member coming to Belfast is embarrassing in richness, so that a few hints as to the character of the chief links in the neighbourhood may be a help.

Carnalea.

The Royal Belfast, the oldest club in Ireland, has its home at Carnalea, about ten miles from Belfast, on the south shore of Belfast Lough, and reached quickly by a good train service on the County Down line. It is a nine hole course, and though on the sea, it is in many respects like an inland course, the ground being clay. The greens are good, and the bogey score is 39. There is a most comfortable club house, and the situation of the ground is beautiful, overlooking the Lough and the Channel.

Royal Belfast Golf Club, Carnalea, County Down.

Newcastle.

The Royal County Down, at Newcastle, is the seaside course most favoured by Belfast golfers. It is reached in about an hour from Belfast by express train, and is most beautifully situated at the foot of the Mourne Mountains, the highest hills in Ulster. On the edge of the links is the Slieve Donard Hotel, an excellent hotel owned and managed by the County Down Railway. Arrangements are being made for members of the Representative Meeting to spend the week end, July 24th to 26th, there. The course is about 6,400 yards, almost, if not quite, the longest in Ireland, and is most sporting. The bogey score is 80. The ground, which is an excellent natural one, has been carefully tended for about twenty years; the greens are well kept and are exceptionally large, and the course is very free from daisies in summer. Though a championship course, it is never overcrowded. It is here that the golfing members of the British Medical Association are invited to go on Friday, July 30th, to play for the Belfast Cup, presented by the golfing members of the Ulster Medical Society. Some particulars and an illustration of the cup will be found on p. 1426. Golfing members will be made honorary members of the County Down Club from Monday till Friday, and on Friday they will be entertained at luncheon and tea in the club house.

Golfing at Carnalea on Belfast Lough.

Portrush.

The Royal Portrush is one of the oldest clubs in Ireland, having been founded in 1888, and from the unrivalled situation of the championship course on the open Atlantic coast, is a favourite in summer. It is, indeed, often crowded at that season, and start is by ballot in the height of the season. The course is first class in every respect, well laid out on magnificent natural ground, and well kept. Portrush is about two hours from Belfast by express train, and as it is a most popular seaside resort, there is ample accommodation of all sorts, though, like the links, the accommodation is apt to be rather crowded in the busy season. One further remark should be made on Portrush, and that is to say that the air possesses in a remarkable degree stimulating or bracing qualities, which, according to many visitors, make a day there worth a week in any other place. It is hard to say why the air should vary much at places only a few miles apart, but vary it undoubtedly does, the coast only ten miles to the west being quite different.

Port Salon.

Port Salon, in County Donegal, is well out of the world, and quite beyond the range of the cheap tripper. It is reached in a few hours from Londonderry by train, boat, and car. There is a comfortable hotel, with splendid natural links, the first tee just outside the hotel door. As only hotel visitors play there, it is never crowded. The course is a long 18-hole one, with a bogey of 82, and the greens present a wonderful variety of character. There is a little harbour and pier close to the hotel, where a dive or swim can be had before breakfast. There is some fishing in the neighbourhood.

Rosapenna.

Rosapenna, also in North Donegal, is somewhat similar to Port Salon, and equally far from the madding crowd. It has a first-rate hotel, rather more fashionable, and excellent natural links running right round it. The course is about 6,000 yards with a bogey of 81. It is most splendidly situated, with the cliffs and bays of Sheep Haven on one side and Mulroy Bay on the other. There are numberless excursions to be made, and river, lake, and sea fishing for non-golfers.

Bundoran.

Bundoran is at the extreme south of County Donegal, and is a favourite summer resort. There is a good 18-hole course of about 5,500 yards, owned and kept in excellent order by the Great Northern Railway, which owns also a most comfortable hotel on the links. The course is never overcrowded, and, though not flat, is easy walking, with comparatively few hazards. The bogey is 77. Bundoran is the terminus of a branch of the Great Northern Railway, and is easily reached from both Belfast and Dublin.

Greenore.

Greenore, in County Louth, has also a good 18-hole

course and a very good hotel, owned and managed by the London and North-Western Railway Company, whose boats sail between Holyhead and Greenore daily. The course is just beside the station, and is well kept and interesting, with plenty of good hazards, both natural and artificial. The bogey is 77. Greenore is a remarkably bracing place, with lovely views of the Mourne Mountains, which rise steeply from the water on the other side of the picturesque Carlingford Lough.

Other Courses.

There are a number of inland courses round about Belfast as well as many shorter seaside courses in various watering places within easy reach of the city. Of the inland courses, the one most largely used by medical men and by the Queen's University staff is Malone, which is just a mile from the college, half the distance being traversed by the Stranmillis tram, which passes the front gate of the college every few minutes. The course is an 18-hole one, over undulating ground, and quite good. It is about 5,400 yards in length, with a bogey of 77. Arrangements will be made for members of the Association to use the links during the week.

Golf Competition: The Belfast Cup.

The Ulster Medical Society has arranged to present to the British Medical Association a cup, to be known as the "Belfast Cup," to be played for at annual meetings, and to be won out and out by any member winning it three times. It will be played for on the Friday of the Belfast meeting, on the fine links of the County Down Club at Newcastle, co. Down, kindly lent for the day by the council and members of the club. The play will be by bogey score. The cup is designed after the famous Ardagh Cup, now in the Kildare Street Museum in Dublin. The original, one of the finest examples of ancient Irish work, is composed of gold, silver, enamels, and jewels, and was, it is believed, meant for use as a chalice. The challenge cup will be of silver, about 9 in. high, with gilt panels and coloured enamel bosses; round it will be set stones representing the four Provinces of Ireland—the black pebble for Leinster, the white or Carnmoney pebble for Ulster, the red stone for Munster, and the green Connemara marble for Connaught.

The Belfast Cup.
To be played for at Newcastle on July 30th. Presented by the Ulster Medical Society.

CRICKET MATCH.

The North of Ireland Cricket Club, the premier club of Ulster, and one of the best in Ireland, has kindly offered to play a one-day match against a British Medical Association team. The beautifully turfed grounds of the club are only about five minutes' walk from Queen's College, where the Association will meet. The local executive will be very glad if some English cricketer will undertake to organize a team for the occasion; any one interested in the matter should communicate with one of the Honorary Local Secretaries.

LAUNCH.

The local executive has some reason to hope that there may be an opportunity during the annual meeting of witnessing the launch of one of the great steamships for which the shipyards of the city of Belfast are famous. A large vessel for the Orient Line is at present on the stocks in Messrs. Workman, Clark, and Co.'s yard, and is expected to be launched in July. The exact date cannot be settled so far ahead, but if the firm can make it coincide with the visit of the Association to Belfast, it has courteously promised to do so.

BOATING.

The sheltered and picturesque waters of Belfast Lough are naturally much favoured by amateur sailors, and quite a large number of medical men regularly spend Saturday afternoon in sailing. Some of these have made arrangements to entertain brother sailors who may visit Belfast next month, and will give them an opportunity of trying their skill in managing a boat if they so wish.

The Royal North of Ireland Yacht Club will invite yachting members and their friends to a garden party at the club house at Cultra, about five miles from Belfast, on Friday afternoon, July 30th. A fleet of about fourteen of No. 2 and No. 3 classes Belfast Lough "one design" boats will be placed at the disposal of the visitors, and races will be got up if enough enter. It will greatly facilitate this if those interested in sailing, and intending to avail themselves of the club's hospitality, will write to that effect to the Honorary Local Secretaries at Queen's College, Belfast.

ARCHAEOLOGY.

Some inquiries have reached Belfast as to the objects of archaeological interest in the neighbourhood. In the city itself these are conspicuous by their absence, as it is entirely modern, and in Ulster generally there is not a great wealth of architecture of archaeological interest. There are a number of old castles, the remains of the places fortified by the first Norman invaders, but these are generally of a very simple character, and attain interest more as picturesque objects in the landscape than on account of their architectural merits. There are few ecclesiastical remains, the only place of much interest near Belfast being Grey Abbey, co. Down, about sixteen miles from the city. It was a Cistercian abbey, founded in 1193 by the wife of John de Ccurci.

By far the most interesting antiquities in the district are the numerous prehistoric remains. The whole country is dotted over with Druidical altars or cromlechs, and one of the finest, surrounded by an immense earthen circular rampart, is only half an hour's drive from the college. There are also numbers of artificial caves or souterrains, but these are not easily explored without skilled guides. Of the well-known round towers there are several within reach, the best being that at Antrim, mentioned above. The stump of one may be seen at Drumbo Church, within an easy drive of the college.

CONCLUSION.

Enough has been said to establish to the satisfaction of any member intending to be present at the annual meeting that he may feel sure, whatever his tastes in the matter of outdoor recreation, of being able to gratify them should he be able to take a holiday of a week or a fortnight either before or after. It would, of course, be easy for the visitor with more time at his disposal to go further afield, and to spend a month or more in extending the trip to the west and south-west of Ireland, where mountain scenery of great beauty, and a coast line of unequalled grandeur may be explored on foot with the help of the public cars, railways, and steamboats. But this article has been confined to the north of Ireland, which possesses special features of its own which may well detain the tourist, and where he may pleasantly fill in any short interval of leisure.

In a subsequent article some further account will be given of the immediate surroundings of Belfast and of the most convenient ways of reaching the city from various parts of England and Scotland.

THE MODERN TREATMENT OF FRACTURES.

DR. LUCAS-CHAMPIONNIÈRE, on his arrival in Cardiff on June 3rd, was accorded a cordial welcome. The eminent surgeon, who was accompanied by Madame Championnière and their two daughters, was met at the Cardiff station by the Lord Mayor (Alderman Lewis Morgan), Mr. Lynn Thomas, C.B., Mr. William Sheen, and Dr. Crawford Treasure (President of the Cardiff Medical Society).

After the usual formalities, the party, headed by mounted police, drove to the Mansion House, where during their stay in Cardiff Dr. Lucas-Championnière and family were the guests of the Lord Mayor. In the evening his lordship gave a private dinner at the Mansion House in honour of the visitors. The guests at the dinner included Dr. and Madame J. Lucas-Championnière, Mr. J. Lynn Thomas, C.B., and Mrs. Thomas, Dr. W. B. Crawford Treasure, J.P., Mrs. Treasure, Dr. F. P. S. Cresswell, Dr. H. E. Skyrme and Mrs. Skyrme, Mr. Wm. Sheen and Mrs. Sheen, Dr. Wm. Martin and Mrs. Martin, Dr. C. T. Vachell and Mrs. Vachell, Dr. W. T. Edwards, J.P., the Deputy Mayor (Councillor J. W. Courtis, J.P.), Dr. D. R. Paterson and Mrs. Paterson, the Misses Championnière, and the Misses Lewis Morgan.

MEETING OF THE CARDIFF MEDICAL SOCIETY.

Address by

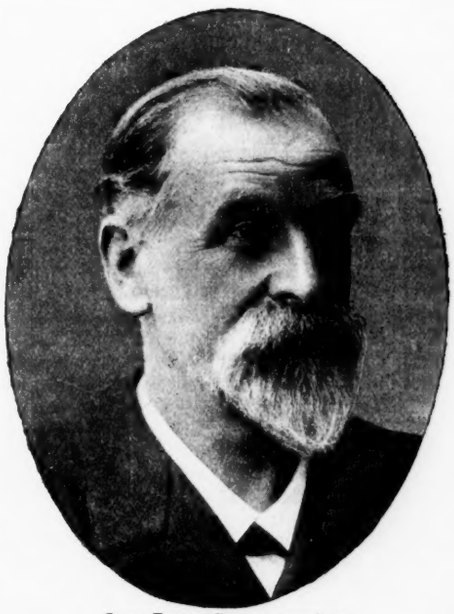
M. LUCAS-CHAMPIONNIÈRE.

Dr. CRAWFORD TREASURE, President of the Cardiff Medical Society, took the chair at the annual meeting of the society on Friday afternoon, June 4th. Owing to the large attendance, the meeting was held in the theatre of the Engineers' Institute, which was crowded by members of the society and other medical men who had accepted the invitation to be present.

The PRESIDENT, addressing M. Lucas-Championnière in French, welcomed him to Cardiff, and thanked him for honouring the society by undertaking to give the annual address. He recalled the fact that Professor Kocher, of Berne, had delivered the address two years ago, and the society was proud that his successor as President of the International Society of Surgery had become his successor also as the orator of the Cardiff Medical Society. The medical profession in Great Britain welcomed M. Lucas-Championnière with the greater cordiality because it was by no means his first visit to these islands and because he had taken back from his first visit an appreciation of the great principle propounded by Lister, for the reception of which his mind had been prepared by his study of the researches of Pasteur. Dr. Lucas-Championnière had been the earliest and the most convincing exponent of Listerism in France, but his name would be imperishably associated with the great reform he had himself introduced in the treatment of fractures, and he called upon him to deliver his address on that subject.

M. LUCAS-CHAMPIONNIÈRE, who on rising was received with loud applause, then delivered in English the address which is published at p. 1397. At its conclusion he was again much applauded, and the applause was renewed when he briefly acknowledged the presentation to him by the President of the diploma of honorary membership of the society.

A vote of thanks to the orator was moved by Dr. E. TENISON COLLINS, President-elect of the Society, in which he expressed his sense of the compliment paid to the society, to Cardiff, and to English surgery, and concluded by expressing in French to M. Lucas-Championnière the pleasure with which all present had listened to his lucid and interesting address.



JUST LUCAS-CHAMPIONNIÈRE.

Dr. T. D. GRIFFITHS, of Swansea, ex-President of the British Medical Association, in seconding, expressed his delight at the chance of hearing such a master of surgery. In the admirable address there were valuable lessons to the physician as well as to the surgeon. Their illustrious guest had emphasized the necessity for mobilization in the cure of fracture. By inference the physician could not help feeling that there was a lesson also for him as to the necessity of systematic movement, of sensible exercise, in prolonging life. As old age came, there came too stiffness in the joints—immobility. Old men properly exercised would hear the advancing motor car and would be able to step aside, and the sensible physician would have patients who would constantly be congratulated upon their smartness of appearance and comparative quickness of action. It had been a lecture full of suggestion to its hearers, it was a lecture that would be historical.

Mr. CLEMENT LUCAS supported the resolution in a few words, commending the suggestiveness of the address, and congratulating the society upon having enjoyed the honour of a visit from the greatest French surgeon of his generation.

PRESENTATION OF THE LYNN THOMAS AND SKYRME FUND.

On the same evening the annual dinner of the Cardiff Medical Society was held at the Royal Hotel, the gathering being one of the largest and most representative of the medical profession that has ever been held in the Welsh metropolis.

Dr. CRAWFORD TREASURE, J.P., President of the Society, was in the chair, and on his right sat the guest of the evening, Dr. J. Lucas-Championnière (Paris), and on his left the Lord Mayor of Cardiff.

After the usual loyal toasts had been duly honoured,

The CHAIRMAN gave the toast of "Our Illustrious Guest," and in so doing said it would ill become him to enter into a description of the magnificent work in surgery which Dr. Lucas-Championnière had accomplished. He had followed in the footsteps of Pasteur, to whom medicine and surgery owed so much to-day. The work that their guest had done, and was still doing, was a great one. To have introduced the antiseptic system into France was an achievement of the highest order; to have applied that system in the way he had and which had resulted in the reduction of mortality among women was also a great achievement; and now, to crown the labours of years, he had introduced a system which promised to revolutionize the treatment of fractures. The fame of their guest was not confined to his own country, but was international, and they honoured in him the head of the International Surgical Society.

The toast was drunk with musical honours.

Dr. LUCAS-CHAMPIONNIÈRE, in a brief response, said he must thank them all, both on behalf of himself and his wife and daughters, for their extreme kindness, and they felt especially grateful to the Lord Mayor and Lady Mayoress for their hospitality. They had all made them feel at home. He would content himself with asking them to accept his heartiest thanks for the cordial way in which his health had been honoured.

Mr. WILLIAM SHEEN, who had acted as honorary secretary for the Lynn Thomas and Skyrme Fund, then made a statement regarding the initiation and progress of that movement. He said he might remind them that the case concerning which the action was brought occurred in July, 1904, and the first trial was in December, 1905, and the second trial in November, 1906. The plaintiff claimed £2,000 damages, but was only awarded £100. The total expenses of the trial were large. When the plaintiff's costs had been taxed and the Medical Defence Union had paid £928, there remained to be paid a sum of £3,200. At once the feeling of the medical profession

was made manifest with regard to it by a dinner held in Cardiff six days after the trial, at which 110 medical men attended, and which was the largest gathering of the kind that had then been held in that city. As soon as possible afterwards steps were taken to open a fund, and the credit for the initiation of this was due to Dr. Maclean, Mr. Edmund Owen, Mr. Robert Jones, and the editors of the two leading medical papers, to whom he would like to express their feelings of gratitude. As a result of the efforts of those gentlemen there was published at the end of March, 1908, a document known as "The Appeal," signed by over ninety leading men of the profession throughout the kingdom; they were all men of position, and included the President of the British Medical Association, the representatives of medical societies all over the country and of the hospitals. This appeal was widely circulated, and as a result during a period of four months there was collected for the fund no less than £1,788. When the expenses had been paid, the two gentlemen who had been involved in the matter would each receive £800, or just about half the expense to which they had actually been put. He understood that so large a sum had never been collected for such a case before. There were 2,000 subscribers, and it was interesting to know that of these 200 gave sums of half a crown. In conclusion, Mr. Sheen said that the work he had been able to do in this matter had been a labour of love.

Mr. Edmund Owen congratulated the Cardiff Medical Society upon the tremendous success of the gatherings that afternoon and evening. It must have been a great comfort to Mr. Lynn Thomas and Dr. Skyrme to know that in their time of trial—or he might say of trials—there was not only the profession of Cardiff standing by them but the profession of the whole of Great Britain and of the whole Empire. It was not in mortals to command success, but when medical men had done all they could to deserve it and had not altogether succeeded in attaining it, they deserved the sympathy of every member of their profession. Mr. Lynn Thomas and Dr. Skyrme had come well through their ordeal, but the verdict of the courts was against them. That day it had been shown that the verdict of the profession was with them, and in an affair of this sort, where a man's brain and heart and honour and conscience were concerned, it was much better, he ventured to believe, to have the verdict of the profession than of the court; and he was quite certain that they would not like the verdicts reversed. He was sure that all would agree that it was exceedingly fit and proper that Dr. Lucas-Championnière should be asked to make that presentation. Their distinguished guest that evening was a disciple of Lister, and from being a disciple he became an apostle; the amount of good that he had done was immeasurable. When their guest came over impressed with the Listerian doctrine to see Lister in 1868, he followed him to Glasgow, and he followed him in 1875 to Edinburgh, and it was in these cities that he acquired that slight Scottish accent which they had noticed that evening. The fact that Dr. Lucas-Championnière was the President of the International Society rendered that gathering one of almost international importance. If it did not actually do that, their distinguished guest was doing what their dear King had done, and what Lansdowne and Edward Grey and Delcassé and Loubet had done—putting brick by brick into the *entente cordiale*.

Sir Alfred Thomas, M.P., in a brief speech, said how much pleasure it gave him to be present and to speak as a layman of his friends, Mr. Lynn Thomas and Dr. Skyrme. Mr. Lynn Thomas was an honour, not only to his profession, but to Cardiff and to the little country that gave him birth. He knew that Mr. Lynn Thomas had the courage of his convictions, and, to quote in English a Welsh triad, it might be said of him that he had an eye to see Nature, a heart to love Nature, and the courage to follow Nature. He rejoiced at the ample vindication of Mr. Lynn Thomas and Dr. Skyrme that evening. He could not forget the splendid work that they and other members of their profession had done for the Medical School of Cardiff, in connexion with the foundation of which the names of W. T. Edwards and Daniel Jones would ever be associated.

Mr. Mansell Moullin (Senior Surgeon to the London Hospital) said that he was very glad to have the opportunity of speaking, for two reasons, one was that Mr. Lynn Thomas and Dr. Skyrme were two of his oldest friends, men with whom he had worked and whose word he could rely upon down to the ground. The other reason was that that occasion was, he believed, unique. He did not think there had ever been a testimonial presented under circumstances similar to this—a testimonial raised not from Cardiff, or Wales, or England only, but supported by the whole world. Its success was due simply to the fact that the medical profession believed in the justice of its cause. Larger amounts had been subscribed on occasions where there was some question of charity, but there was no such question here, and the numbers of those who subscribed showed that the medical profession believed in the justice of the appeal. If it ever became his lot to have any such work done for him he could only hope that it would fall into the hands of Mr. William Sheen, who had done such excellent service as honorary secretary in this case.

Dr. Lucas-Championnière then made the presentation, Mr. Lynn Thomas and Dr. Skyrme walking arm in arm amidst a scene of great enthusiasm to the head of the banqueting hall. In making the presentation, Dr. Lucas-Championnière said he was proud to be present on that occasion and to have the honour of making the presentation. The occasion was not merely British, but had an international character.

Mr. Lynn Thomas, who had a splendid reception on rising to respond, said he desired to thank them all for their very warm reception. That was, indeed, in his life a very memorable event. It had awakened what he had only very little realized till within the past twenty-four hours. He had, he believed, ever since the verdict in the court, enjoyed the confidence of his brother medical men, but he had not an idea till quite recently that members of the profession could feel assured that there was an invisible hand which would render help to any member when accused wrongly of not doing his duty. That was a thing of which any profession might be very proud. He desired first of all to thank their guest of the evening, because by his presence he was not only paying a compliment to the Cardiff Medical Society, but to the whole British Empire. He looked upon him as a prophet from the East, travelling West. He (the speaker) would also like to take the opportunity of thanking his colleague, Mr. William Sheen, for the kind way in which he had taken up the matter of the testimonial. His action had cemented the friendship existing between them. He also desired to express his gratitude to the editors of the *Lancet* and the British Medical Journal, the two most powerful journals in the medical profession in the British Empire. The case which had come before the courts was one that affected every member of the profession, and he was gratified indeed to know that the testimonial had been subscribed to by no less than 2,000—from Lord Lister, the head of their profession, to many medical men in the smallest villages. It was in 1892 that he paid his first visit to Paris, and on that occasion he saw their distinguished guest treating certain types of fractures in a way that he had not seen before and which had surprised him, but he had also seen their guest doing ordinary opera-

tive surgery, and was very much impressed with his skill and care, so that he was prepared to believe that his method of treating fractures was worthy of study. In 1895 their guest brought out his great book, and a careful perusal of it, and further opportunities of observing M. Lucas-Championnière's practice, had made him one of their guest's disciples. He had a confession to make, and it was that he experimented once on a patient. That experiment was an extension of the principle laid down by Dr. Lucas-Championnière. The patient had ruptured his tendo Achillis. Mr. Lynn Thomas thought what their guest would have done under similar circumstances, and decided to follow out the treatment as in fractures. It was carried out with a measure of success quite satisfactory to the patient. He had reported the case in the BRITISH MEDICAL JOURNAL, and he would like to tell them that that patient was himself. On one occasion he was returning from Paris; the sea was very rough, and some of those on deck had on occasions to clutch anything near when the vessel rolled. One gentleman near him used a word that was very familiar in the English language, and he (the speaker) asked him if he was hurt. He replied that he had strained his wrist, adding, "I broke my wrist a month ago." So he (the speaker), thinking for once in his life he would play the part of a Sherlock Holmes, said, "You have been under Dr. Lucas-Championnière." The gentleman turned and exclaimed, "How do you know?" "Because," was the reply, "it is only by his method that you would be able to use your hand within a month." In conclusion, the speaker again tendered his grateful thanks for all the sympathy he had received.

Dr. H. E. SKYRME, who was heartily received, said he wanted to express to them in the simplest words of sincerity the gratitude which he felt for the sympathy of the profession extended to Mr. Lynn Thomas and himself, and also for the practical form which that sympathy had assumed in generous contributions to the fund raised to reimburse their monetary loss, the intention being much more comforting than the actual money contribution. The considerable cost to which they were put was incurred from a sense of the necessity of conserving the interests of the profession at large, which was made especially apparent to them by the first trial at Cardiff. The knowledge that they were not fighting their own battle only, but that of the profession generally, induced them to employ the best possible counsel at any cost, the vital principle involved in the action being the right of every medical practitioner to use his discretion under any circumstances. One practical result of the action had been that the two medical protection societies who formerly undertook the cost of ordinary counsel for the defence only had since made arrangements with insurance companies, which, in consideration of a small annual subscription, undertook the payment of any damages that might be awarded and the taxed costs up to a certain amount involved by an adverse verdict—a substantial consideration to which he would call the attention of every medical man.

The toast of "The Visitors" was submitted by Dr. D. R. PATERSON.

The LORD MAYOR OF CARDIFF expressed the pleasure with which he had listened to Dr. Lucas-Championnière's address and taken part in giving him a civic welcome to Cardiff.

Dr. SQUIRE SPRIGGE said that he was very glad to be present on what he considered to be a professional occasion of the highest importance, but, as the significance of the meeting had already been so eloquently indicated by previous speakers, he would confine his words to one particular point—namely, the manner in which the appeal to the profession was made. That manner was wholly admirable. The statement of the case in the medical press was studiously fair, and every point made was, or could be, vouched for by first-class surgical opinion. The original letter of appeal was based on broad grounds, without a touch of bitterness or personal recrimination in it; it was signed by names eminent in the medical world as professors, consultants and leaders generally, and received a remarkable scientific endorsement from the Continent and the United States. The success of the movement was assured by the manner in which it was inaugurated no less than by the righteousness of the cause advocated.

Dr. DAWSON WILLIAMS, who was also called upon to respond, said that the movement which reached its final stage on that occasion owed nothing of its success to personal considerations. It was a movement to vindicate the right to freedom of thought. The claim to that right was no new thing for it had led to the foundation of the mediaeval universities, but it was appropriate enough that this most recent defence of the principle should have originated in Wales, for the people of the principality had in comparatively recent times been impelled, by a punctilious adherence to that principle, willingly to make many sacrifices. In the exercise of the medical art, freedom of thought implied freedom to act for the best according to the best knowledge of the day. In conclusion he said that he was commissioned to state that Dr. Rayner, Treasurer of the British Medical Association, had intended to be present, but was detained in London by pressure of business. Dr. Davy too, who, when President of the Association, had taken a warm interest in the initiation of the movement, was also unfortunately detained at the last moment.

The Rev. A. HENDERSON (Vicar of Cardiff), submitted the toast of "The President," who responded.

During the proceedings an excellent programme of vocal and instrumental music was performed by Mr. Arthur Angle and party.

MEDICAL PRACTITIONERS AND THE FINANCE BILL.

IN the BRITISH MEDICAL JOURNAL for May 8th, 1909, an article was published on the Budget in its relations to the medical profession. The novel and complicated character of several of the proposals of the Chancellor of the Exchequer made it inevitable that many points should remain more or less obscure pending the introduction of the Finance Bill. After prolonged discussion of the Budget resolutions, the bill was introduced just before the Whitsuntide holidays, and a perusal of its clauses renders it possible to clear up several difficulties and to remove a number of misapprehensions.

Income Tax.

The income tax proposals were summarized in our former article, and we find comparatively little in the Finance Bill that was not there referred to. There are, however, some interesting features which may be touched upon. The first of these is the method of estimating the income for the purposes of the supertax on total incomes exceeding £5,000. Clause 47 provides that the total income is to be taken as "the total income . . . from all sources for the previous year, estimated . . . as the total income . . . is estimated for the purposes of exemptions or abatements. . . ." This proposal seems a wise one, as tending to simplicity, so far as simplicity is possible in income tax matters. The practitioner who is liable to pay supertax will not be required to enter into an elaborate calculation in order to make his return; he will simply insert on the form the amount of income under each head on which he paid tax during the previous year, and the aggregate of these amounts, less an abatement of £3,000, will be the amount on which he will be called upon to pay the supertax of 6d. in the £. Thus, in making a return for the current year, 1909–10, for the purposes of the supertax, the practitioner will insert as his professional profits, not the amount of his estimated income for 1909, nor the amount of his realized income for 1908, but the amount on which he was assessed to the ordinary income tax in 1908, which, as our readers are aware, represents the average profits realized during 1905, 1906, and 1907. His income from appointments must similarly be taken at the amount on which he paid tax in 1908, and so too with dividends, rents, interest, and any other private income. Though possessing the merit of simplicity, this system involves two possible sources of hardship. A careless taxpayer who was over-assessed in 1908, and did not trouble to appeal in due time, will again suffer this year, as the amount of the excessive assessment will be taken for the purposes of supertax. Again, a person whose income exceeded £5,000 last year will pay supertax this year, although he may be now receiving considerably less than £5,000 a year. It should, however, in fairness be stated that a person whose income was less than £5,000 last year will pay no supertax, although his income may greatly exceed that amount this year.

Medical men who own considerable property will be interested to learn that in reckoning income for the pur-

poses of supertax a special deduction will be made for expenses of management of 5 per cent. of the annual value of the property. From the wording of the clause it appears that this deduction will be allowed whether any expenses of management are actually incurred or not.

Professional profits are, for the purposes of the ordinary income tax, dealt with by local or district commissioners, unless the option is exercised of claiming to be assessed by the special commissioners, a body of paid officials appointed by the Treasury. The supertax is to be assessed exclusively by these special commissioners, who are to make regulations for the rendering of returns and for carrying the provisions of this part of the bill into effect. The selection of the special commissioners to deal with the supertax is probably due to the feeling that persons with large incomes would object to the disclosure of all their circumstances to their friends and neighbours, and possibly to their rivals, and therefore would prefer to be assessed by a body of officials rather than by local unpaid commissioners.

All persons on whom the prescribed notices are served are to make returns whether they are or are not chargeable with supertax, and every person who is liable to pay this tax is required to give notice to the special commissioners that he is chargeable before September 30th, annually. This requirement is doubtless intended to catch persons whom the taxing authorities might omit to serve with return forms. The penalty for failure to make returns or to give the notice referred to is £50, and, after judgement has been given for that penalty, a further penalty of £50 a day is incurred for every day during which the failure continues. It is obvious that attempted evasion of the supertax will be extremely dangerous.

A time limit of three years after the end of the year of assessment is imposed for the making of assessments to supertax. This corresponds with the limits applicable to the ordinary income tax.

With regard to the ordinary income tax, Clause 49 makes it clear that the allowances of £10 for each child, which are to be granted where the total income does not exceed £500, are to be made primarily from the earned income—that is, at the rate of ninepence. This clause also provides that the expressions "child" and "children" shall include stepchild and stepchildren, but not an illegitimate child or illegitimate children. This is in accordance with what had been generally anticipated.

It is to be noted that practitioners whose total incomes lie between £2,000 and £3,000, and to whom the reduced rate of one shilling will apply for 1909, so far as their incomes are earned, must make their claims for relief by sending declarations setting out their total incomes before September 30th, 1909. Attention is called to the fact that the words are *before*, and not *on or before*, September 30th. Failure to notice this distinction was the cause of a good deal of misapprehension and some disappointment two years ago, when the relief in respect of earned income was originally introduced.

By Clause 50 of the Bill persons who reside out of the United Kingdom but derive income therefrom will cease to be entitled to the exemptions and abatements applicable to residents in this country. This provision is novel as regards British income tax, although it is a feature of several foreign and colonial systems. Retired medical men drawing their incomes from this country, who have gone to reside abroad may find their pockets adversely affected by this proposal.

Motor Cars.

The new scale for licences for motor cars was given in the article already referred to, and is based upon the horse power of the cars. The unit of horse power is to be calculated in accordance with regulations to be made by the Treasury for the purpose. Medical automobilists are to pay only one-half of the full rates, and we quote in full the subclause conferring this relief.

66 (4).—If a duly qualified medical practitioner proves to the satisfaction of the Commissioners or council by whom the licence is granted that any motor car kept by him is kept for the purpose of his profession, he shall be entitled to an allowance in respect of the duty payable under this section on the car equal to half the amount of duty so payable.

It is interesting to observe that the relief applies to a car "kept for the purpose of his profession." The word "exclusively" does not appear in this expression, so that it is reasonable to suppose that a car kept by a doctor for professional purposes, and principally so used, will not be charged with the higher rate of licence duty merely because it may be used occasionally for private purposes. This interpretation seems, at any rate, to be fair and equitable.

Disappointment has been expressed at the refusal of the Chancellor to extend the principle of "half rates" to the tax on petrol used by doctors for their cars. It is to be hoped that some concession on this point may be made during the passage of the bill through the House of Commons. That medical men are not entitled to this rebate as the bill stands is clear from the fifth schedule, which contains the conditions under which relief is to be granted. It runs as follows:

REBATE OF MOTOR SPIRIT DUTY.

Motor spirit used for the purpose of supplying motive power:

(1) To a motor car which is constructed or adapted for use, and is used solely, for the conveyance of any goods or burden in the course of trade or husbandry, and whereon the Christian name and surname and place of abode or place of business of the person, or the name or style and principal or only place of business of the company or firm keeping the same, shall be legibly and visibly printed in letters of not less than one inch in length.

Death Duties and Life Assurance.

The clauses imposing the increased death duties contain no provision of special import to the medical profession, although, in common with other members of the taxpaying community, they will probably find it increasingly necessary to make some provision by life assurance to meet the considerable burden which this group of taxes now imposes. This form of providing for the death duties has the incidental effect of reducing the practitioner's income tax, for, as is well known, the amount of income applied in payment of life assurance premiums is, subject to a limit of one-sixth of the total income, allowed as a deduction from the assessment.

Spirit Duty.

The increased stamp and tobacco duties and liquor licences call for no special comment in this article. With regard to the spirit duty, we may be allowed to reiterate the opinion that the manufacture of medicine should be allowed a special rebate of the additional duty imposed under this head. No provision for this rebate appears in the Finance Bill, and it can be introduced only by a direct amendment in Committee. We venture to express the hope that the Government will see its way to the acceptance of such an amendment in due course, for, as has been pointed out, an increase in the cost of medicines must fall to some extent upon the poorer classes—a result which we take to be directly contrary to the intentions of the present Administration.

Land Values.

We have left until the last the proposals for the imposition of duties on land values, and, as they do not affect members of the medical profession as a class, our explanations and comments will be brief. Three duties are to be imposed: A duty of 20 per cent. on increment value, payable on every occasion of the sale of land, or of any interest therein, or on death; a reversion duty of 10 per cent. on the determination of any lease, the original term of which exceeded twenty-one years, to be levied on the value of the benefit accruing to the lessor by reason of the determination of the lease; and an annual duty of one halfpenny in the pound on the capital value of undeveloped land. It is claimed by the advocates of this tax that its effect will be to force development, to bring into the market building land which is now being held up for excessive prices, and, by reducing rents, to assist in the solution of the problem of the better housing of the working classes. On this highly controversial political question we express no opinion, merely remarking that members of the medical profession will welcome any measure which substantially tends to the improvement of the conditions of the life of the poorer members of the community. In any case, we rejoice to observe that the bill contains exemptions from undeveloped land duty for parks, gardens, and open spaces which are open to the public as of right, or to which reasonable access is granted to the public, where the Commissioners of Inland Revenue are satisfied that that access is of benefit to the public as contributing to the amenity of the locality. Similarly, land used for the purposes of games or recreation is to be exempted on like conditions.

THE FINANCIAL PROSPECTS OF MEDICINE.

INTRODUCTORY.

AMONG all classes of society complaints of hard times have ever been common, and medical men have probably never been an exception to the general rule. During the past few years, however, allegations of undue difficulty in making an adequate income have been increasingly frequent. They have come, moreover, not only from comparative novices in the practice of medicine as a livelihood, but from those whose knowledge and experience in medicine as a craft fall in nowise short of their professional attainments—from men who never forget the personal equation and are just as skilful in dealing with patients as in diagnosing their diseases.

Whether medicine when handled by men of average capacity and average ability is a less efficient money-making machine now than formerly is a question on which there is perhaps room for more than one opinion. No answer could be deemed unimpeachably correct which did not take into consideration a multiplicity of factors, including such minor points as differences in present and past general standards of life, the comparative expense of working a practice now and at earlier dates, variations in the value of money and consequently in the adequacy or inadequacy of the fees commonly received formerly and now.

Clearly, therefore, the question mentioned covers a very wide ground, and this article is not intended to supply a complete answer, the point considered being of a somewhat narrower character. It is as follows:

Assuming that complaints of hard times among medical men are well founded, are there any specific factors which might serve sufficiently to explain and justify their existence?

In other words, are there any material differences in the conditions of medicine at the present time as compared with the recent past which, so far as the general mass of medical men are concerned, would be likely to make it a less paying occupation than it was formerly?

Probably every medical man who has been long in practice could suggest some circumstance more or less of this order, but at the bottom of the whole question lies a factor the value of which cannot be determined by any man's personal experience; moreover, it is one not easy to define by a single phrase.

The clearest way of stating this factor is to ask whether the profession at the present time is overstocked or understocked as compared with the past. Put in this way we have a definite issue which can be considered with reference to the profession of medicine on the same general lines as would be followed in relation to any other occupation or trade. Overstocking in any of these may be brought about in a great number of different ways. Thus:

1. The demand may fall while the supply remains the same.
2. The supply may increase more rapidly than the demand.
3. Irrespective of any alteration in the ratio between demand and supply, the calling may be overstocked owing to new fashions of meeting the demand being invented.
4. Or any of these factors may be combined.

Each of these factors constitutes a separate question, and the order in which they are placed is perhaps the most natural one. In applying them, however, to medicine, a variation of sequence will be convenient. Furthermore, since the main question is not one of absolute but of relative overstocking, it is necessary to determine the period over which the investigation should be carried.

Provided that the same data are obtainable throughout, the period should be as long as possible; hence the years from 1881 to 1908 have been chosen, this period of twenty-eight years presenting the further advantage that a large proportion of the men who were at work at the beginning of it are either still in practice or have only recently retired.

The geographic extent of the investigation is also of importance, in order still further to ensure the comparability of the data obtained. On this point it should be said that soon after the investigation commenced it became clear that if it were extended to the whole of the British isles it would be difficult to avoid certain possible sources of error. In Scotland and in Ireland the courses followed by socio-political matters have not been identical either with one another or with those of England and Wales. The figures given, therefore, relate only to England and Wales. At the same time, however, it may be said that investigation regarding Ireland and Scotland was carried on sufficiently far to enable it to be stated with some assurance that, if an investigation were completed regarding each of these countries separately, the broader conclusions derivable would be identical with those hereinafter shown to be deducible from investigation of the position of the medical profession in England and Wales.

The ground being thus cleared, the method of investigation and the results may now be detailed.

POSSIBLE PATIENTS AND ACTUAL MEDICAL MEN.

It is necessary to assume for the moment that the demand for the work represented by the labour of medical men is just as great as ever; or, in other words, that of the four factors mentioned No. 1 has not been operative. No. 2 factor is thus reached, and applies to the medical profession in the following fashion:

Any community of, say, a thousand people may be regarded as a thousand possible patients, and, assuming that their liability to sickness remains the same in any two years, the demand for medical work will remain the same in the two periods. If, however, the number of medical men ready to do that work alters, the supply will vary accordingly, and comparative understocking or the reverse at once be created. Hence the ratio between the medical population or the actual workers and the general population or possible patients, and its variations year by year are both points of interest; while the difference between the ratios at the beginning and at the end of the period will show the presence or absence of relative overstocking so far as factor No. 2 is a conclusive test.

This information is supplied by Table A, in which the general population is the total number of persons living at

TABLE A.—*Possible Patients and Actual Medical Men.*

Year.	Col. 1. Number of Medical Men.	Col. 2. Rate of Increase.	Col. 3. Population.	Col. 4. Rate of Increase.	Col. 5. Ratio of Population to Medical Men.
1881	15,308	—	26,046,142	—	1,700.4
1882	15,383	0.48	26,334,942	1.10	1,710.9
1883	15,827	2.88	26,626,949	1.11	1,681.5
1884	16,408	3.67	26,922,152	1.10	1,639.7
1885	16,801	2.39	27,220,706	1.10	1,619.1
1886	17,168.5	2.19	27,522,532	1.10	1,600.4
1887	17,644	2.76	27,827,706	1.10	1,576.1
1888	18,064.5	2.38	28,136,258	1.10	1,556.9
1889	18,514	2.48	28,448,239	1.10	1,535.0
1890	18,906.5	2.12	28,763,673	1.10	1,520.3
1891	19,170	1.39	29,085,819	1.11	1,516.2
1892	19,564.5	2.05	29,421,392	1.15	1,502.8
1893	20,148.5	2.98	29,760,842	1.15	1,476.0
1894	20,771	3.08	30,104,201	1.15	1,448.3
1895	21,310	2.59	30,451,528	1.15	1,428.0
1896	21,850	2.53	30,802,858	1.15	1,408.7
1897	22,342.5	2.25	31,158,245	1.15	1,393.5
1898	22,638	1.32	31,517,725	1.15	1,391.2
1899	22,891	1.11	31,881,365	1.15	1,391.7
1900	23,269.5	1.65	32,249,187	1.15	1,384.8
1901	23,589	1.54	32,621,263	1.15	1,381.9
1902	23,812	0.94	32,997,626	1.15	1,384.7
1903	24,002.5	0.80	33,378,338	1.15	1,389.6
1904	24,219.5	0.90	33,763,434	1.15	1,393.0
1905	24,491	1.12	34,152,977	1.15	1,393.5
1906	24,727.5	0.96	34,547,016	1.15	1,396.1
1907	24,920.5	0.78	34,945,600	1.15	1,401.2
1908	25,092.5	0.69	35,348,780	1.15	1,407.7

the middle of each year, as calculated by logarithms on the basis of the decennial increase ascertained to have taken place between the two previous census periods. On the other hand, the number of medical men regarded as in practice at the middle of each year is the arithmetic mean between the number of medical men shown by the *Medical Directory* to be resident in England and Wales in the issue for one year and in the issue for that which follows it. This seems the only possible method of making the calculation, and for all practical purposes may be taken as perfectly correct. The *Medical Directory* always includes a certain number of men who give up practice before the middle of the year, but a certain number who are not in practice when the *Directory* is published have commenced work by the time the sixth month has been reached, and the two may be balanced one against the other. Finally, in calculating the number of possible patients to each medical man, the medical population has been deducted from the total population.

In looking at this table the first notable point is that this period of twenty-eight years has seen a great increase both in the general population and in the medical population, but that relatively the increase in the latter is the more marked. In round numbers, the thousands of medical men have increased from 15 to 25; while, again, in round numbers, the millions of population have increased from 26 to 35. The percentages of increase from year to year are shown in the second and fifth columns respectively. On running the eye down these it will be seen that the rate of increase in the medical population, especially in the earlier years, is very irregular, while the yearly additions per cent. to the general population vary very slightly throughout the whole period.

This regularity in the case of the general population is, in a measure, artificial; for, though it is a fact that the population expands very steadily, the appearance of regularity is increased by the fashion in which the population is estimated, and by printing only few decimals. From this point of view, the figures given as regards the medical population may be regarded as the more correct, for they are founded on a yearly census as opposed to a ten-yearly census in the case of the general population.

For all practical purposes, however, both sets of figures may be taken as absolutely correct, and the point to be noted is that while the percentage of increase in the medical population varies from less than ½ per cent. to over 3 per cent., the annual increase in the general population never reaches half that figure. It will be seen, too, that the higher figures in the medical population are all to be found in the first two-thirds of the period, while in the remaining one-third, or since 1898, there has been an intermittent tendency for the percentage of increase to diminish, such diminution for the last three years having been quite steady.

There still remains to be mentioned, however, the last column. This shows the number of possible patients which year by year each practitioner might have been expected to have, had the whole population been divided up in precise proportion to the number of medical men. It will be seen that each practitioner's field of work steadily diminished in size year after year until nine years ago, when it began slowly to expand once more. In other words, the number of possible patients to each actual medical man dropped from 1,710 in the year 1882 to as low as 1,384 in the year 1900, since when it has slowly increased until the ratio of possible patients to actual medical men—omitting decimals—now stands at 1,407 to 1.

All these points, however, will be gathered much more readily on reference to Chart B, opposite, and to Chart C, on p. 1434. These are graphs originally made on a very large scale, and in each case they are approximately accurate to three places of decimals. From Chart C will be gathered at a glance the fashion and extent to which each medical man's nominal field of action has expanded or contracted during the period under review.

The same knowledge could indirectly be gleaned from Chart B, but its real value is that it shows the different rate of increase in the general and medical populations much more clearly than the figures given in Table A. It should be noted that the percentages on which it is based are not the percentages given in that table. Those are the percentages of increase from year to year; while the percentages graphically shown in Chart B are the differences between the first year under consideration and each of those which follow, and the chart makes it quite clear that almost throughout the period the increase in the number of the medical profession has been much more rapid than the increase in the population.

These tables, therefore, whether taken separately or together, conclusively prove that the second of the factors mentioned in the introduction has been actively at work in the last twenty-eight years. The supply has increased more rapidly than the demand, with the result that the ratio of possible patients to actual medical men has fallen by nearly 18 per cent. The first conclusion to be reached, therefore, is that, so far as factor No. 2 can decide the question, overstocking of the profession of medicine at present exists.

It would not be right, of course, to jump forthwith from this conclusion to a final verdict on the question initially raised, and to say that the profession of medicine has been proved to be a less efficient money-making machine for the average man than formerly. What has been proved so far is simply the existence of one circumstance which, unless counterpoised by some other circumstance, must inevitably bring about the condition of affairs in question. So far, in short, the evidence is of the kind known as prima facie, and it may even be that the relative overstocking is not really so high as that which the figures would indicate, because before the period commenced, as also throughout its first two-thirds, there was a large number of unqualified assistants at work as well as registered medical men.

This circumstance is not without interest, but for the moment it need merely be said that any effect it might be esteemed to have on the primary question under investigation is balanced by another circumstance, and that in any case the conclusion to be based on what is herein called factor No. 2 is not vitiated by its existence. The relative overstocking may be small or may be great, but in either case it represents a circumstance likely to diminish the financial attractions of medicine for the average man, for if a practitioner has even one more competitor to deal with than formerly, his chances of financial success are diminished to that extent.

The net conclusion, therefore, is that the investigation, even when carried out to this limited extent, has already revealed a circumstance which goes some way towards explaining and justifying complaints as to hard times amongst medical men.

Some Side Issues.

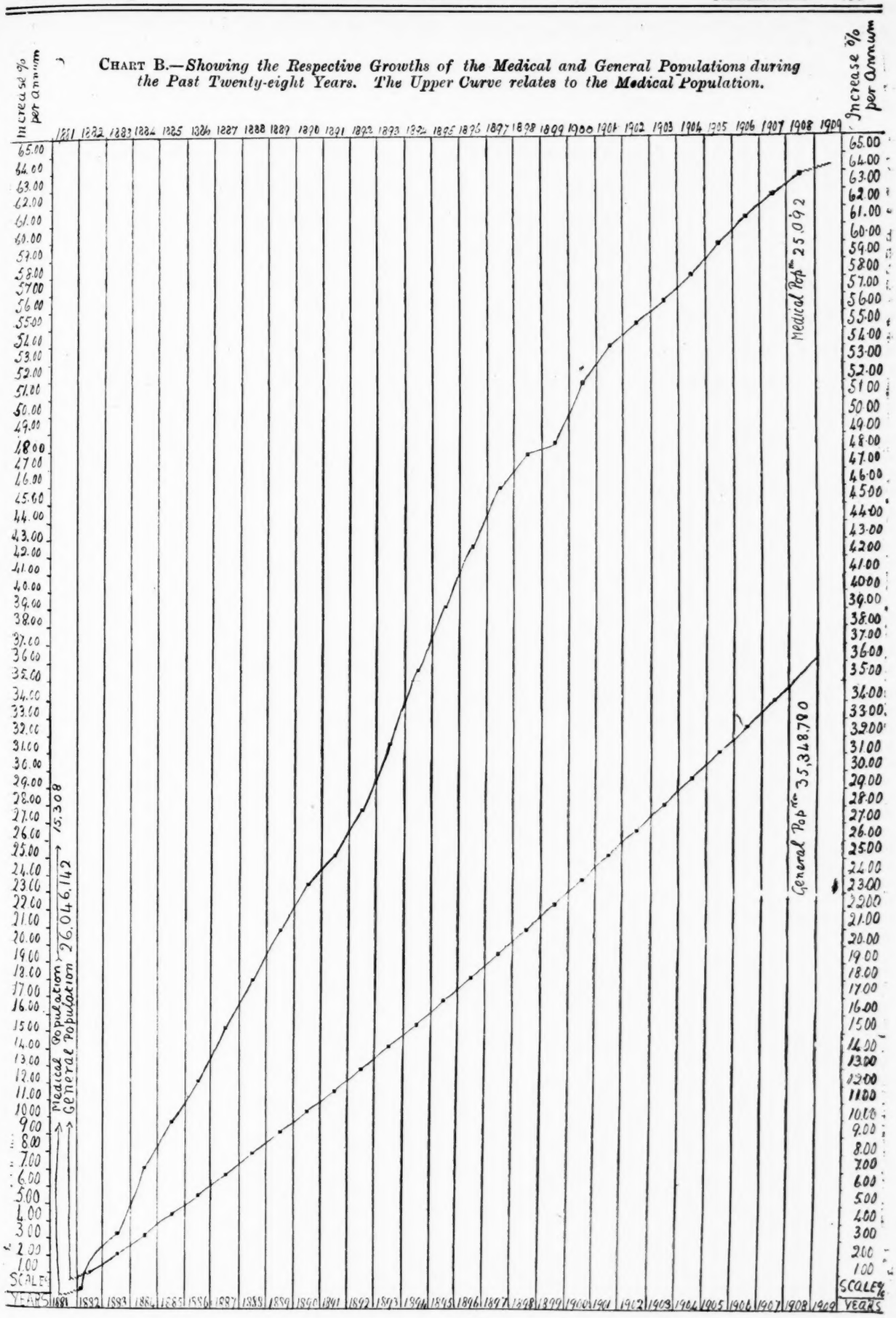
Before ending this purely statistical consideration of a question which is as intricate as it is interesting, one or two comments may be permitted on the character of the curves in Chart B, and the cause of the fluctuations in the number of possible patients to each actual medical man shown in figures in Table A and graphically in Chart C.

As for the former, it is important to note that the disproportion in the growths of the two populations is evident at the very beginning of the period, and that, with one or two exceptional years towards the end, it is persistent throughout it. If, therefore, a cause is to be looked for, search must be made for a circumstance capable of continuous action, or for a sequence of circumstances whose net effect would be that in question. Nothing of the latter class suggests itself, but conceivably it might be argued that the growth of the medical profession is only abnormal because the general population has ceased to increase at the same rate as formerly, or because opportunities for medical men to settle abroad have diminished, or because medical men from the sister countries have settled down in England and Wales more frequently than heretofore.

On these points it need merely be said that the first contention would be annihilated by figures which need not here be given. The growth in the general population has by no means fallen off, while that of the medical population, so far as materials for calculation exist, has in the period under consideration vastly exceeded that of any earlier date.

As for the second suggestion, the cause in question may possibly have been at work, but it does not seem, on the whole, as if its effect could have been more than minimal. The third suggestion is insusceptible of statistical treatment, but the medical profession in England and Wales

CHART B.—*Showing the Respective Growths of the Medical and General Populations during the Past Twenty-eight Years. The Upper Curve relates to the Medical Population.*



has from the earliest times been largely recruited from Scottish and Irish practitioners, and the extent to which such recruiting has been going on during the past twenty-eight years has not, so far as can be discovered, varied during the course of that period. It is true that the number of Irish medical graduates who remain in Ireland

has greatly diminished during the course of those years, but, on the other hand, the number of Scottish medical men who practise in Scotland has greatly increased.

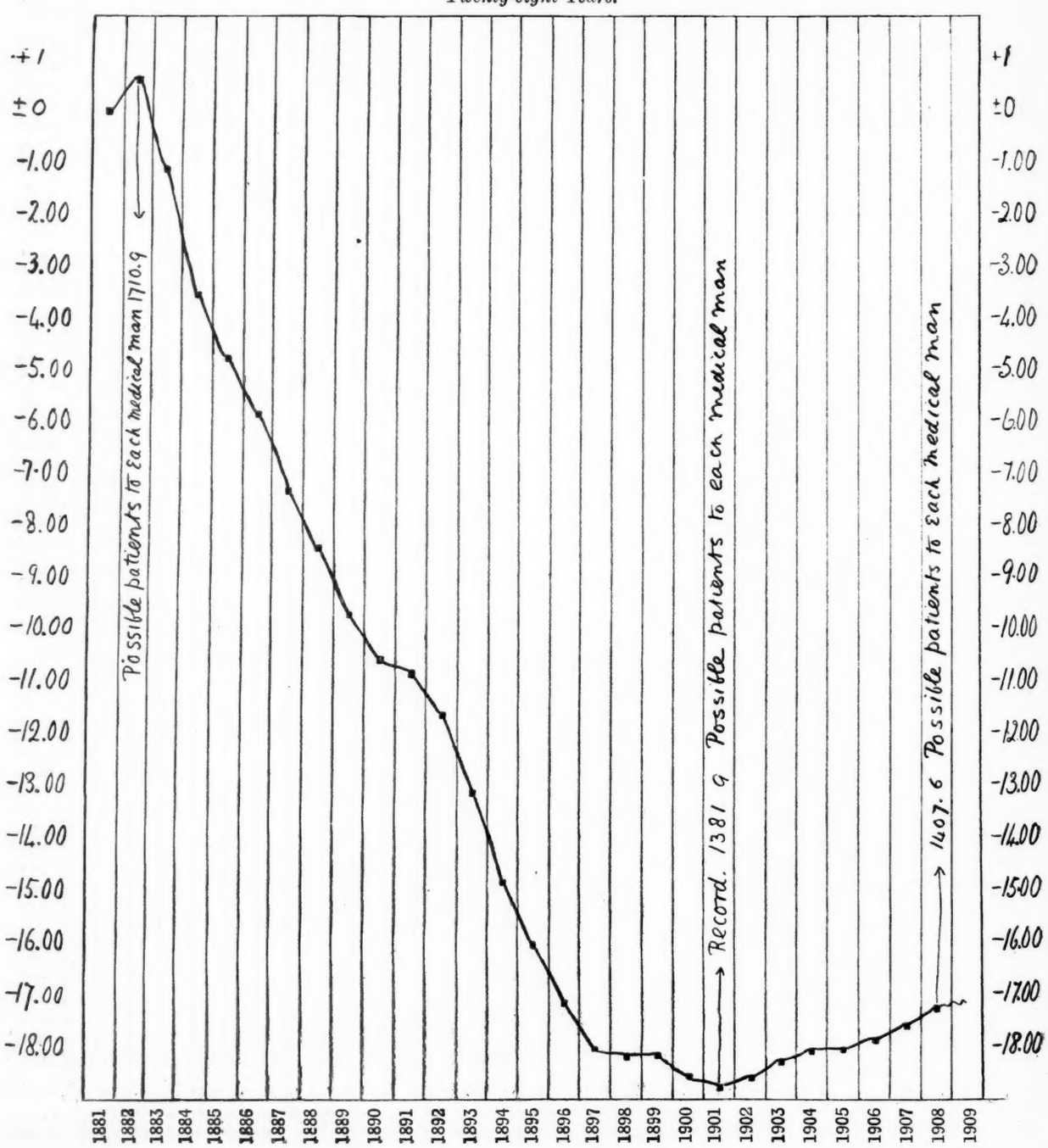
On these grounds, therefore, it seems fair to conclude that the increasing gap between the curves in Chart B—the decreasing ratio between possible patients and actual medical men shown in Chart C—is due neither to an arrest of growth in the number of possible patients, nor to blockage of former outlets, nor to a mere transfer of medical men from one part of the country to another, such as would be represented by an inrush into England and Wales of graduates from the sister countries.

The character of the curves is, therefore, in all probability simply due to the fact that too many men have entered the medical profession in the last twenty-eight years; either because owing to the spread of general education an increased number of men is seeking to enter the learned professions, and amongst others that of medicine, or because erroneous ideas have been prevalent as to the prospects which the profession of medicine offers.

There are two other points worth mentioning. The action of the General Medical Council in putting a stop to the employment of unqualified assistants might possibly have been expected to affect the curve relating to medical men. Were it to be supposed that the unqualified man was capable of getting qualified, the effect of forcing him to do so or to abandon his occupation would seem likely to have increased the disproportion in the growth of qualified medical men. But, of course, the unqualified assistant was only unqualified owing to lack either of means or of energy to become qualified.

Quite naturally, therefore, his disappearance is not found to affect the curve in the manner stated. On the contrary, it is after his disappearance that the two curves tend to separate less widely. In other words, the disproportion in the growths of the two populations is less marked in the very latest years than in any part of the period, and this is why a slight rise in the number of possible patients to actual medical men is to be noted on Chart C. As already stated, the number at first ran down from 1,710 in the year 1882 to 1,381 in the year 1901, and then rose slightly until it now stands at 1,407.

Chart C.—*Showing the Variations in the Number of Possible Patients to Actual Medical Men during the last Twenty-eight Years.*



Why there should have been this slight rise is puzzling, and at present nothing which seems quite a satisfactory explanation suggests itself. It may be noted, however, that in the year 1890 the nominal length of the curriculum for medical students was extended, and it is about ten years later—by which time knowledge of the increased length must have become general—that we find the disproportion in the growths of the two populations slightly lessening. How long this diminution will continue remains to be seen. Meantime, the net outcome of the investigation represented by this article may be restated in a few words:

1. It has been found that the ratio of possible patients to actual medical men has materially fallen in the past twenty-eight years.
2. This means that one of the accepted causes of relative overstocking in any calling, trade, or profession, exists in the case of the profession of medicine.
3. Hence one specific factor has been discovered which quite independently of any other circumstance would go far towards explaining and justifying complaints of hard times among medical men.
4. Since the average medical man of to-day has even in point of mere numbers more competition to contend with than had his predecessor, it at once becomes evident that the profession of medicine should be regarded—prima facie at any rate—as a less efficient money-making machine for the average man than it was at the commencement of the period under investigation—namely, the twenty-eight years ending January 31st, 1909.

And this was the question initially propounded for consideration.

LITERARY NOTES.

SIR SAMUEL WILKS writes:

I have enjoyed reading about an old diploma, as the names of the signatories are familiar to me. On my own College diploma, 1847 (?), I have the name of John Goldwyer Andrews and also Liston. I forget the others, but I will try and find my diploma. Andrews I had seen and heard about, for my old master to whom I was apprenticed was dresser to him. He always called him in for consultation. He knew he was an uncultivated man, for he told the story of a student who, seeing lice on a patient's head, pointed them out to another student to warn him, said in an unknown (to the patient) tongue to his fellow, "*Pediculi!*" whereat the surgeon, also looking, exclaimed, "I see nothing particular" (pediculi). He mentioned also Andrews's jealousy on seeing his juniors performing new operations. These younger men were Adams, Scott, and Luke. I think it was the last who was the first man in London to remove the upper jaw for a growth. When half way through it he got into some muddle, and asked Andrews a question. He answered in a surly manner some words I forget, but equivalent to, "As you have attempted it you know best how to go on with it." Scott I knew by sight, as I often saw him riding home on horseback through Sydenham Park, and I am under the impression that it was his park which he sold to the Crystal Palace and on which it stands now. He had a large practice in the City for sore legs, because his father had commenced making sore legs a speciality and treating them in a manner which had a name like Baynton. The mercurial ointment he used was long after called Scott's ointment. I think it was nothing more than leaving off all the rubbish hitherto used, putting on some of this mild ointment, strapping it up, and leaving it alone for a week or two. This reminds me, after speaking of Liston, of University College, known for his splendid operations like Ferguson, that I think it was he who introduced water dressings for wounds, which I take it was mainly successful in preventing the use of the messes then in vogue. I was able to compare this superior method myself with what was done at the French hospital when I was in Paris, seeing the surgeon stuff in the charpie into a wound covered with some yellow stuff looking like the material they used to put into the axle boxes of the railway carriages.

An article on William Hamilton, Royal Academician, fashionable portrait painter and friend of Mrs. Siddons, which appeared just a year ago in the *Connoisseur*, has a melancholy interest, as the death of the writer, Mr. A. P. Spanton, M.A.Cantab., L.R.C.S.Ed., a son of Mr. W. D. Spanton of Stoke-on-Trent, was lately announced in the JOURNAL. Apart from the authorship the article has a distinct value of its own, as in it is given an excellent critical estimate of a British painter, now almost forgotten except by the few. According to Mr. Spanton, Hamilton may be regarded as one of the most successful pioneers of the English water-colour school, a fact which would have been recognized earlier if he had not died so soon. Many of his works are now lost, including some of his best oil paintings, but a sufficient number of water-colours remain to show his characteristics, and the difference in style between his earlier and his later work. All his best drawings, such as his "Shepherd Boy," "Girl with Cows," "Eve and the Serpent," belong to the later period, and were produced during the last six years of his life. His earlier work was done chiefly for book illustrations; for instance, he illustrated Tomkins's edition of Thomson's *Seasons*, which was published in 1797, and Macklin's Bible, published in 1800. The majority of his drawings were engraved by Bartolozzi. Hamilton did not disdain to try his hand at decoration, and a cabinet belonging to Charles IV of Spain and a state carriage of Lord Fitzgibbon, both adorned by paintings of his, still exist to prove the versatility of his art. He also painted a set of furniture in imitation of antique cameos for William Beckford, of Fonthill Abbey, the famous and eccentric author of *Vathek*, described in *Childe Harold* as "England's wealthiest son," and some arabesque decorations for the Marquis of Bute at Highcliffe, Hampshire. Of these, however, all trace has been lost. Hamilton's poetical and classical pieces, whilst resembling the work of his contemporaries Opie, Wheatley, and Kauffmann, seem to express more of the extravagance of the eighteenth century, and from them can be gathered a very good idea of the fashion in art at that period. Mr. Spanton's article is illustrated by reproductions of five of Hamilton's pictures, and the author has appended a list of fifty-nine of his extant drawings and paintings, with a full description of each.

In a thesis for the degree of Doctor of Medicine presented to the University of Paris on February 25th, M. Faliu discusses the practice of medicine and pharmacy in ancient Rome. Greece had schools of medicine, but neither degrees nor diplomas. Roman medicine was altogether a Greek importation. Neither under the Republic nor under the Empire was there any diploma. In the Code of Justinian medical practitioners in whatever way they were connected with the treatment of the sick were called *Medici*, the art of pharmacy in the modern sense being in the same hands as the practice of healing. Cujas says: "Medici sunt hi qui medicamenta conficiunt, vulnera curant, cucurbitas admovent, item qui circumcidunt aut castrant." Although there was no diploma, those who wished to call themselves *medici* probably had to follow the lessons of a master with whom they visited patients; there was, in fact, a system of apprenticeship. For a long time pharmacy was a part of medicine, the doctors preparing their own drugs. Galen himself, who lived in the same century, kept an open shop on the Via Sacra. The doctors' shops contained not only drugs but dressings and everything necessary for medical treatment. That some of these drugs were poisonous may be gathered from the lines of Plautus: "Cur ego vivo? Cur non morior? Quid mihi est in vita boni? Certum est: ibo ad medicum atque me ibi toxico morti dabo." This reminds us of Astley Cooper declining to take elaterium from his physicians on the ground that he wished to die a natural death; or perhaps it may be taken to mean that the practitioners of that day were not unwilling—for a consideration—to provide their customers with the means of shuffling off this mortal coil. In the second century the practice of physic began to be separated from the preparation of remedies. The druggists proper at that time were called *Seplasiarii*, and dwelt in a quarter not far from the Capitol, called *vicus thurarius* or *unguentarius*. Even in those days there appears to have been a good deal of counter-practice, but as at present the chemist was mainly the doctor of the poor.

A NEW INSTITUTE OF PHYSIOLOGY IN LONDON.

On Friday, June 18th, the new Institute of Physiology at University College, Gower Street, will be opened by the Secretary of State for War, the Right Hon. R. B. Haldane, K.C., M.P., F.R.S. Although at first sight there might not seem to be much in common between the position which Mr. Haldane holds in the Government and the part he is to take in opening an institute of physiology, there is a special fitness in his officiating at the ceremony. He is a man of wide and varied intellectual interests, with a thorough appreciation of the importance of science to the welfare of the nation as well as of the individual, and his family associations must tend to arouse in him a particular interest in physiology. His brother, Dr. John Scott Haldane, of Oxford, is recognized as a leading physiologist, while the late Sir John Burdon-Sanderson was his uncle. Moreover, the opening of the new institute is to be made the occasion of a review of the University Contingent of the Officers' Training Corps of the Territorial Force which Mr. Haldane has called into being; this corps owes much of its present state of efficiency to the patriotic efforts of Professor Starling and the other professors, all of whom are enthusiastic in the cause.

University College may be said to be the cradle of modern physiology in this country. There William Sharpey taught for nearly forty years. Before his time physiology was looked upon as a "poor relation" of anatomy, and was treated as of comparatively little importance. The teaching was directed mainly to meet the requirements of the College of Surgeons, and the College, though particular about bones and muscles, was believed to care little about cells and the functions of organs. Physiology, as Russell Reynolds said in an address delivered in 1858, was "thrown in as a makeweight." To Sharpey's teaching it was mainly due that physiology gained its rightful place in medical education, and, directly or indirectly, he trained most British teachers of that science for many years. It was at University College that the practical teaching of physiology begun by Michael Foster was further developed by Burdon-Sanderson. These great men were afterwards the creators of the schools of physiology at Oxford and Cambridge. The foundation of a new Institute of Physiology carries on the tradition of University College, and gives to the teaching of physiology there vastly increased possibilities of development.

University College and London University.

Before going further, a few words of explanation as to the existing relations between University College and the University of London may not be out of place, as there is still a good deal of confusion on the subject in the minds of many people. Till two years ago University College was an independent institution, governed by a Council which was elected at an annual meeting of the Board of Governors. In the hands of the Council lay the whole administrative control of the college. University College was in the same position in relation to the University as the London Medical Schools, Bedford College and other institutions, which are labelled "schools" of the university, but are practically autonomous. Of course the fact that University College had been in the first instance founded as "the University of London," and had, with King's College, for many years been the only institution within the University, gave University College a prestige not possessed—except in the case of medicine—to an equal extent by other places of education. But this was a matter more of tradition and staff than of legal status.

By the Act of Incorporation this independence of the college was abolished, and the hospital and that part of the medical school dealing with clinical studies and pathology were formed into a separate corporation, which, as a school of the university, bears the same relation as the other medical schools of London to the university. The whole of the rest of the college, including the departments for preliminary and early medical studies, was handed over to the university, which thus acquired, by the Act of Incorporation, complete control over the college. The college is no longer governed by an independent council but by the senate of the university, which entrusts the actual administrative care of the college buildings and of the teaching carried on therein to a committee which it appoints.

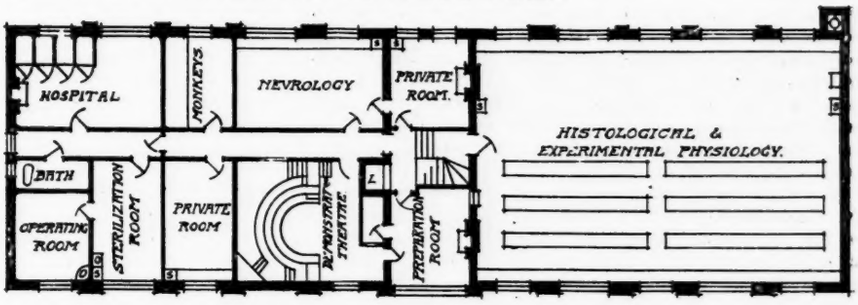
This Act of Incorporation, the promotion of which in itself called for the display of some courage as well as devotion to the university ideal on the part of the authorities of the college, may be the first step in a great movement that will in time place the whole of the academic training in Arts, Science, and Engineering, under the direct control of the university. King's College, with the exception of the hospital and its departments dealing with clinical studies, will shortly be incorporated, and one of the main reasons for the appointment of a Royal Commission on the university was the necessity of bringing about some closer connexion between the new Imperial College of Sciences and Technology, and the university. By such an incorporation of the main bodies of academic studies in the university, an immense impetus will be given to the possibilities of consolidation and development of the facilities for higher teaching and research in London.

At the present time, a medical student who enters the University of London at University College or King's College, is in very much the same position as a student beginning his career at Oxford or Cambridge. He will pursue his studies in the sciences preliminary and ancillary to medicine in laboratories built and maintained by the university and staffed by men who are appointed by the university. In his studies he will have the advantage of mingling with students of other faculties—a condition which has always been regarded as an important factor in the general culture which a student is expected to obtain during his university career. At the conclusion of his training in anatomy, physiology, and pharmacology he will be free to make his choice of a hospital school at which to pursue his strictly professional studies in association with actual bedside observation. Some time must elapse before this condition of things will be extended to the whole of London; but revolutionary changes are so apt to be associated with the destruction of useful energy and material that the wisest course is to proceed gradually, especially in London, so that it may be seen how much of the existing structure can be worked into the university fabric and utilized as active parts of the academic machine. But the erection of such an institute as that at University College shows that the university is determined to take the lead in the development of higher education in London, and to be ready, when the time comes, for the consolidation of all higher scientific teaching under its own control.

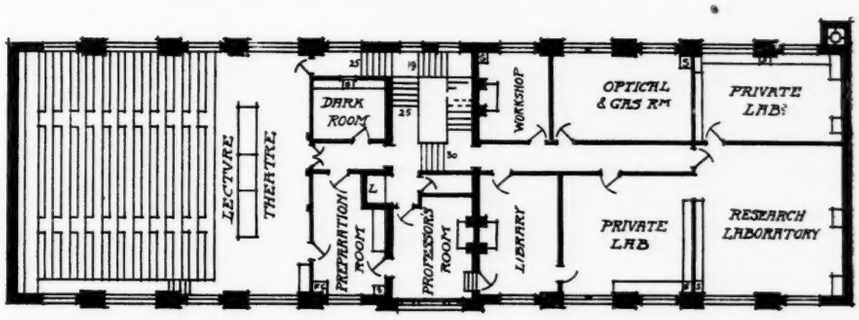
Description of the Institute.

A short time ago a representative of the BRITISH MEDICAL JOURNAL visited the new institute, where he was most courteously received by Professor Starling, Dr. W. M. Bayliss, the Assistant Professor of Physiology, Dr. Page May, Lecturer on the Physiology of the Nervous System, and Dr. R. H. Aders Plimmer, Lecturer on Physiological Chemistry. By these gentlemen he was conducted all over the building. Though not yet complete in all its internal details, our representative was struck by the ample accommodation and the completeness, and indeed the luxury, of the equipment both for teaching and research. He mentally compared it with the laboratory of the early and middle Seventies, in which, according to the legend, Burdon-Sanderson was one day left by his assistant studying a frog's heart, with a sandwich beside him; on the return of the assistant he found the professor wrapt in contemplation of the sandwich, while the frog had disappeared. The difference between the two or three scantily equipped rooms of that day and the palace of science which is about to be opened may be taken as a visible proof of the progress of physiology during the last thirty-five years. For completeness of equipment there is, we believe, nothing to equal the new institute in Germany. A feature of the institute to which our representative gave special attention is the provision made for the comfort of the animals used for experiment. The sheds where they are kept are airy and at the same time well heated. The operating room is fitted up with the same elaborate precautions against sepsis—which means suffering—as those in hospitals of the most modern type, while the arrangements for their accommodation after operation gives proof of the most careful regard for their comfort.

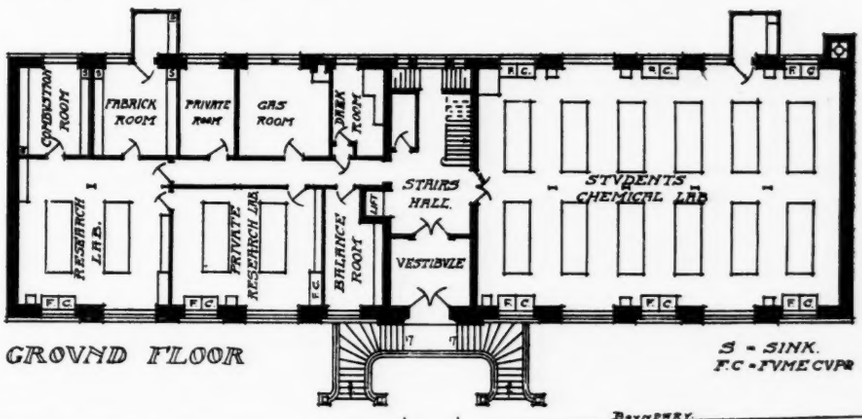
VNIVERSITY OF LONDON,
VNIVERSITY COLLEGE.
NEW PHYSIOLOGY INSTITVTE.



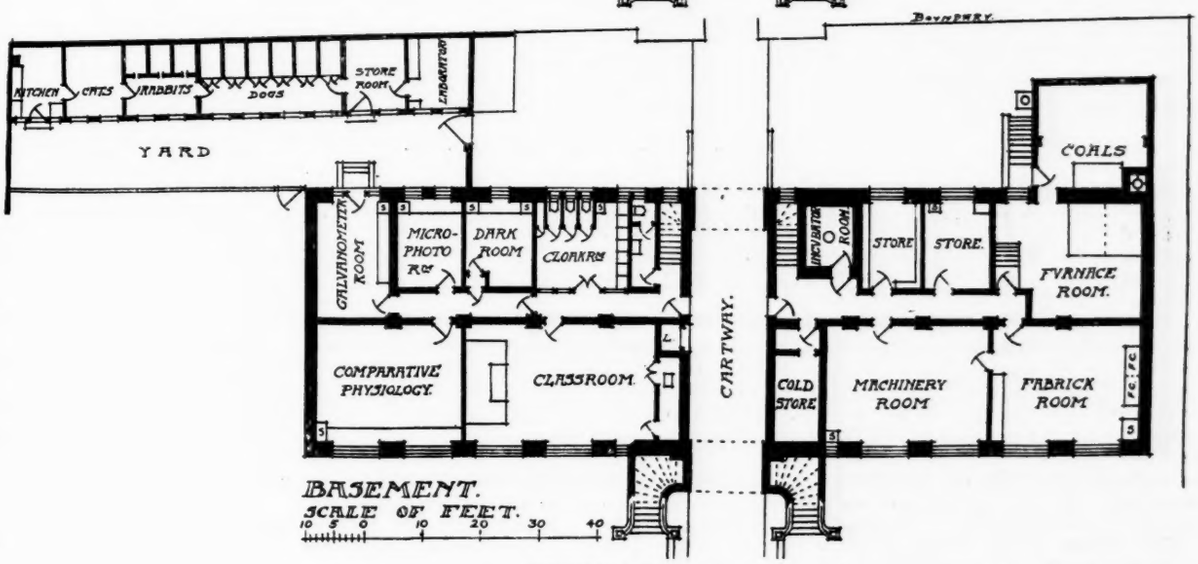
SECOND FLOOR PLAN.



FIRST FLOOR PLAN.



GROVND FLOOR



GROUND PLAN.

The architect is Professor Simpson, F.R.I.B.A., whose account of the buildings, kindly placed at our disposal, is virtually reproduced here. For the photographs we are indebted to Dr. May, to whom, as to Professor Starling, Dr. Bayliss, and Dr. Plimmer, we take this opportunity of expressing our gratitude for the trouble they have taken on our behalf.

The removal of University College School to Hampstead, which was made necessary by the incorporation of the college in the University of London, made available for university purposes not only the South Wing of the college which had been previously occupied by the school, but also a plot of land of 1½ acres in extent which had formerly been used as a playground. Almost every department in the college required increased space for its work. The pressing needs of the departments of chemistry and of the medical sciences, especially physiology, could not adequately be met by a reconstruction of the South Wing, and it was agreed that for each of these departments a new building was necessary. It was estimated that the cost of such an institute of the early medical sciences would be £50,000, namely, £20,000 for anatomy, £20,000 for physiology, and £10,000 for pharmacology. To meet this expenditure the only money available was £10,000, which had been included in the money raised for the provision of the increased accommodation necessary by incorporation, but on July 11th, shortly before the vacation of the ground by the boys' school, two sums, one of £2,000, the other of £3,000, were offered by Dr. Aders Plimmer and Dr. Ludwig Mond for the purposes of a physiology building on condition that the £10,000 already available was also devoted to this purpose and that the erection of the building be commenced forthwith. These offers were accepted by the Senate of the University, and a committee was appointed to co-operate with Professor Simpson in preparing plans for an institute of anatomy, physiology, and pharmacology, with a view to the immediate erection of a portion thereof for the department of physiology, at a cost not exceeding £15,000 without equipment. For the cost of equipment, estimated at £5,000, provision was subsequently made partly by subscriptions, partly by a legacy left by the late Mr. Thomas Webb to the college for the purposes of research. The work of building commenced in the first week of March, 1908, and was completed by May 1st, 1909.

Since the Institute of Physiology is to be part of an institute that will include the other medical sciences, it is so arranged that it can be extended in either direction according to the funds and the land which may be available. It is a simple rectangular edifice occupying a site 44 ft. by 144 ft. This runs east and west parallel to the south wall of the playground and also to the south wing of the college, from which it is distant about 90 ft. Its west end approaches closely to the walls of the gardens of the houses in Gower Street, space thus being left at the east end between it and the racquet court for the erection at an early date of the pharmacological laboratory. Since the building does not front on the main street, architectural embellishment has been diminished as far as possible, the sole objects aimed at being simplicity of construction, stability, and light. Nevertheless, the front is striking from its size and justness of proportion. (Fig. 1.)

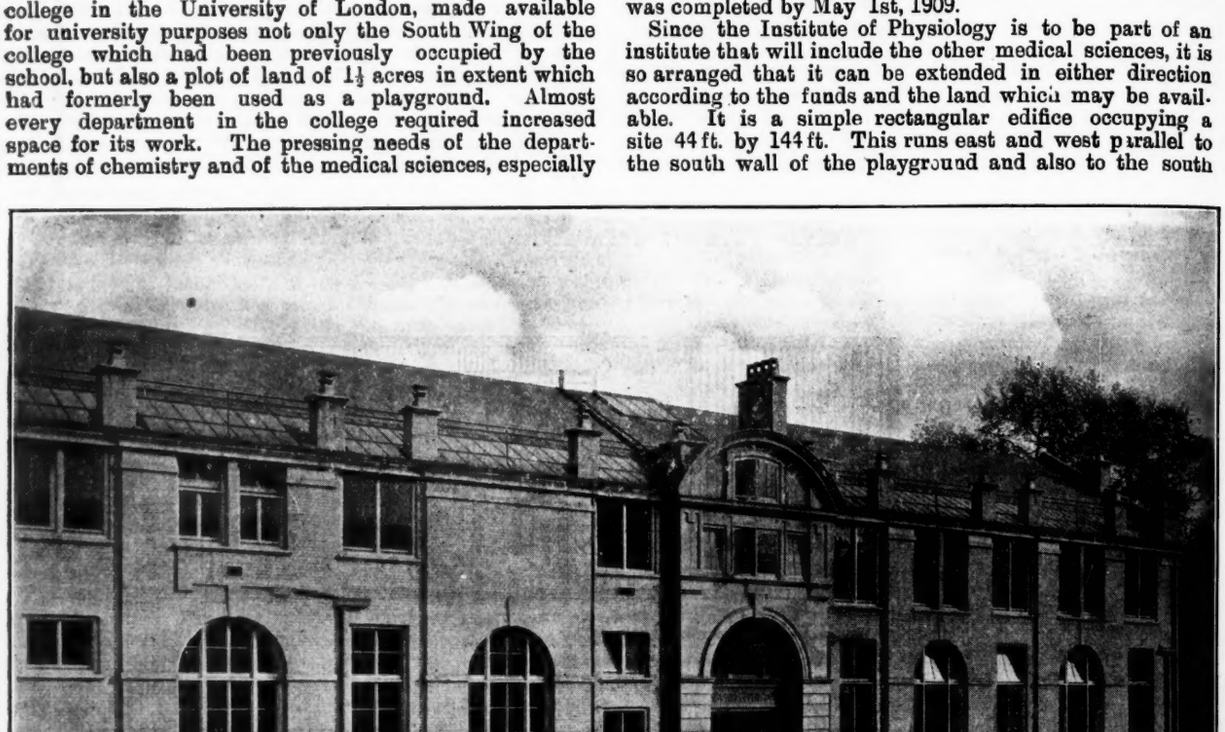


Fig. 1.—Main Entrance, facing due North.

The building consists of a central vestibule and staircase, which is approached from the playground by two flights of stone steps. Underneath this vestibule is a tunnel through the building giving access for carts from the mews in Francis Street. Above the basement are three floors, which consist practically of six large rooms, each measuring about 62 ft. by 41 ft., divided into smaller rooms by means of partitions. Thus, at any future time

it will be possible at very small expense entirely to rearrange the rooms on any floor to meet whatever requirements may arise.

Certain features are to be found throughout the building. The windows, which occupy the maximum amount of wall space allowed under the Building Act, have wide casements opening inwards so that they can be cleaned at any time from the room. Above these casements is a sash hinged vertically for ventilation. The window-sills are as nearly as possible on a level with the window benches, so that no shadow is cast by the sill on the table. All rooms are amply supplied with water, gas, and electric leads. The main water supply is derived from a 3-in. pipe which comes off the main, and is carried up in the centre of the building to the roof level. From this main pipes are taken off at each floor to supply the various benches and sinks. In addition, there is a so-called high-pressure supply, which runs direct from the main to the taps, to which are going to be attached filter pumps or water motors. At the top of the building are two large cisterns with a capacity of 2,000 gallons, which serve as a supply for the boilers as well as a reserve for the whole building in case the water is at any time turned off at the main. By means of valves it is arranged that the whole water supply of the building is automatically connected with the tanks whenever the pressure in the main drops below a certain point.

Most of the rooms are also supplied with gas from two sources, each of which can be controlled from the basement. One of these is constant for the supply of incubators, etc.; the other is turned off every evening at the main. Hot water is also supplied to the chief laboratories. Care has been taken that none of the pipes shall run in inaccessible positions. They either run freely on the walls or in special canals in the floor which are covered with iron plates, so that access is easy at any time. All the pipes are painted, of different colours according to the purpose they serve—for example, constant gas is yellow, ordinary gas red, hot water aluminium, etc. It is possible to turn off both gas and water at every working place from every bench, from every floor, as well as for the whole building.

The heating of the building is effected by means of low pressure steam radiators on the Webster system. In most cases the radiators are situated under the windows, and an air inlet is provided in the wall so that the air may be warmed as it enters. For the extraction of the vitiated air, the theatre, the main class rooms, as well as the dark rooms, are connected by flues with a large extract flue in the roof, from which the air is extracted by means of a sirocco fan driven by a 5-h.p. electric motor. Since the main extract flues are provided with shutters, as are also the flue openings in the various rooms, it is possible to direct the whole force of the extract draught to any particular room. Thus it is possible to provide a current of 12,000 cub. ft. a minute through the theatre or through either of the large class rooms in case of necessity.

The main entrance, which is on the ground floor, is approached by a double flight of steps from the playground. From the landing at the top of the steps one enters the vestibule, which is separated by a glass screen with swing doors from the inner vestibule, which gives access to the laboratories on each side of the ground floor as well as to the main staircase. Into the inner vestibule also opens the lift.

The staircase is built round a well at the back of the building. It is well lighted by windows at the south side as well as by the top light in the roof. The stairs, as well as the doors of the vestibule, are made of oak. The walls of the staircase have a dado 4 ft. high of a greenish terrazzo with a fillet of oak. All the other walls in the building, with the exception of those in the aseptic department, are distempered.

Physiological Chemistry.

The ground floor is devoted entirely to physiological chemistry. To the right of the entrance—that is to say, on the west side—is a large students' laboratory about 62 by 40 ft. (Fig. 2). It is lighted by six windows on each side, and is fitted with twelve benches, each of which will accommodate eight students. Each bench is 12 ft. long by 4 ft. 6 in. wide. The floor of the laboratory is covered with wood planking, except under each bench, where a cement platform is provided at a level ¼ in. above that of the surrounding floor, so that the bench rests on cement, and any water which may accumulate below the benches will at once run away. The water and gas are brought to the benches by pipes lying in a channel in the floor to which access is easy, and are distributed to the benches without being hidden anywhere in their structure. The waste from the benches is carried into open glazed earthenware channels resting at the outer ends of the benches, and opening without traps into lead heads outside the building. The channels are rendered in cement and the earthenware pipes set in bitumen. They are closed by iron plates, which can be raised for inspection at any time.

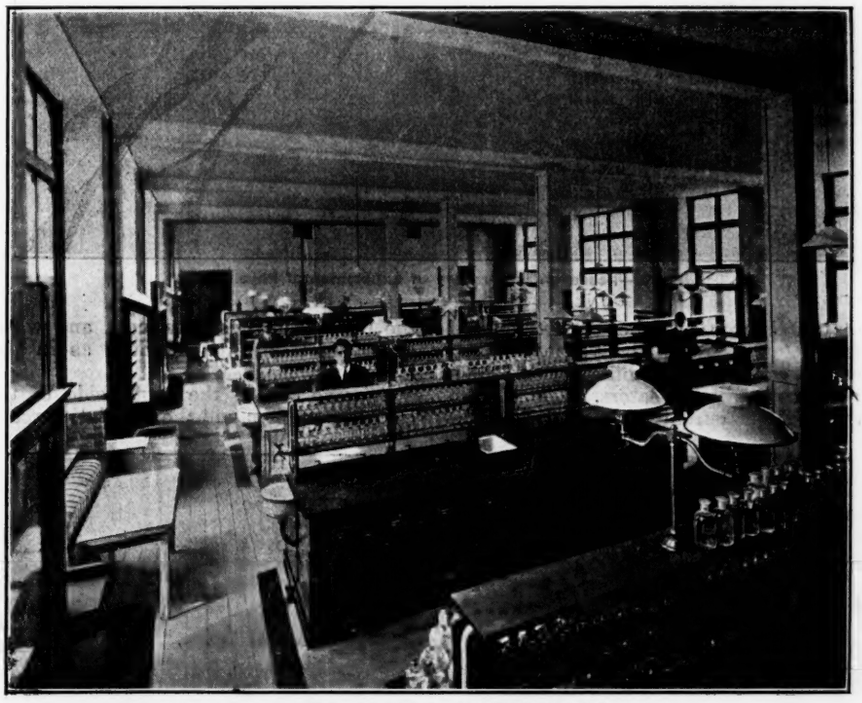


Fig. 2.—Students' Laboratory of Physiological Chemistry.

In three of the windows on each side of the room (six in all) are placed double fume cupboards, so that all manipulations in these cupboards are carried out in the best possible light. Each cupboard is provided with two extract flues built into the wall, and forming rectangular earthenware pipes glazed internally, which terminate on the roof in special heads to prevent any down draught. Even under ordinary circumstances there is usually a very good draught up each of these flues, but each is provided with a gas burner so as to ensure the absence of any down draught.

On the south side of the building the westernmost window opens at the floor level on to a stone balcony which is provided with a stone shelf, with a glazed sink, water and gas. The balcony is roofed in by glass, but is open at the back and sides so that it is possible to carry out manipulations involving the production of objectionable fumes practically in the open air. Between the fume cupboards seven large wooden tubs are provided for

washing-up purposes. Each of these has a large draining rack immediately above. The four benches at the west end of the room have plugs connected with a special electric heating circuit, so that it may be possible to heat inflammable liquids without the use of any flame. The benches are of a pitch pine framing with teak tops; their general structure will be evident on reference to the figure.

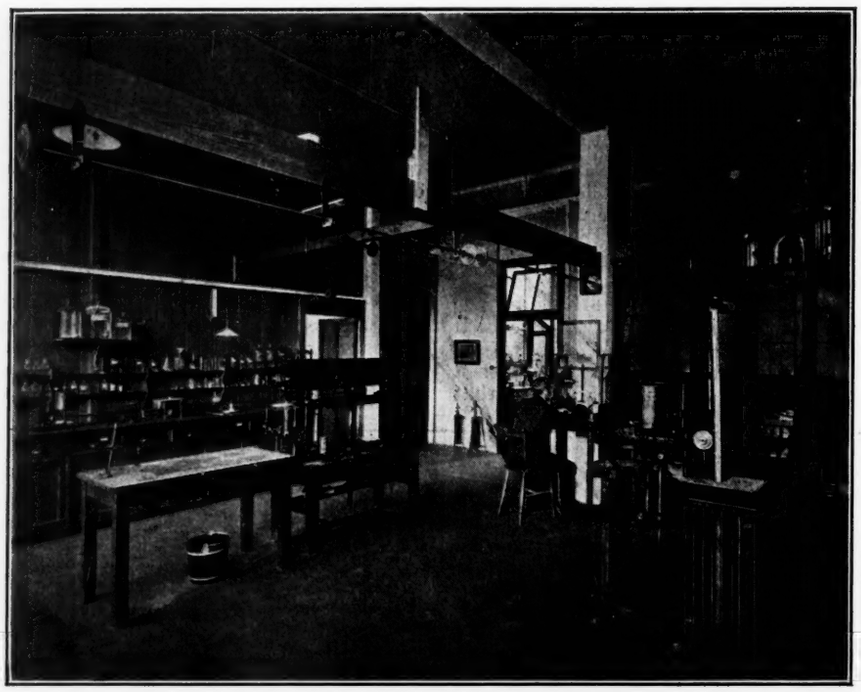


Fig. 3.—Research Laboratory of Experimental Physiology.

The east side of the ground floor is devoted to laboratories for research in physiological chemistry. There is (1) *A Balance Room* with teak shelves for four balances, each provided with an electric bracket at a suitable distance over the balance. The floor is of linoleum over cement. Next to this room is (2) the *Private Laboratory of the Assistant Professor* in charge of the department of physiological chemistry. This room, about 20 ft. by 22 ft., has two double benches, each with gas, ordinary and high pressure water supply, and electric heaters. The pattern of these benches varies slightly from that adopted in the students' room in order to give greater variety in the shape and dimensions of the drawers and cupboards. There is a small sink at each end, each with a three-way tap and a high-pressure tap for filter pumps, and in the middle of the bench four water-taps over a central glazed earthenware channel for use in distillations, etc. All washing up is carried out at a large wooden tub between the windows on the north side of the room. There are two fume cupboards, namely, a large one in one of the windows and a smaller one against the west wall. Along the rest of this wall is a lead covered bench fitted with water and gas for miscellaneous operations.

A door leads from this room into the *General Research Laboratory*. This is a large square room about 25 ft. by 25 ft., also provided with two double benches each 12 ft. long, 4 ft. 6 in. wide, to accommodate eight workers. This room, like the private laboratory, has two fume cupboards, one in the window and one against the wall, and a lead covered bench with water and gas. In addition to the draining pegs over the two washing tubs, each worker is provided with a small draining rack, which is hung at the side of his working place. On this are placed his glass apparatus, after using at the end of each day, so that it shall be ready for his use the next morning. Both these laboratories have a copious supply of hot water for washing purposes. The floor is of deal boards. The supply pipes are brought to the benches in floor channels, and wastes are carried in glazed earthenware channels, as in the large students' laboratory.

Opening out of the south side of this room are the combustion room and the distillation room.

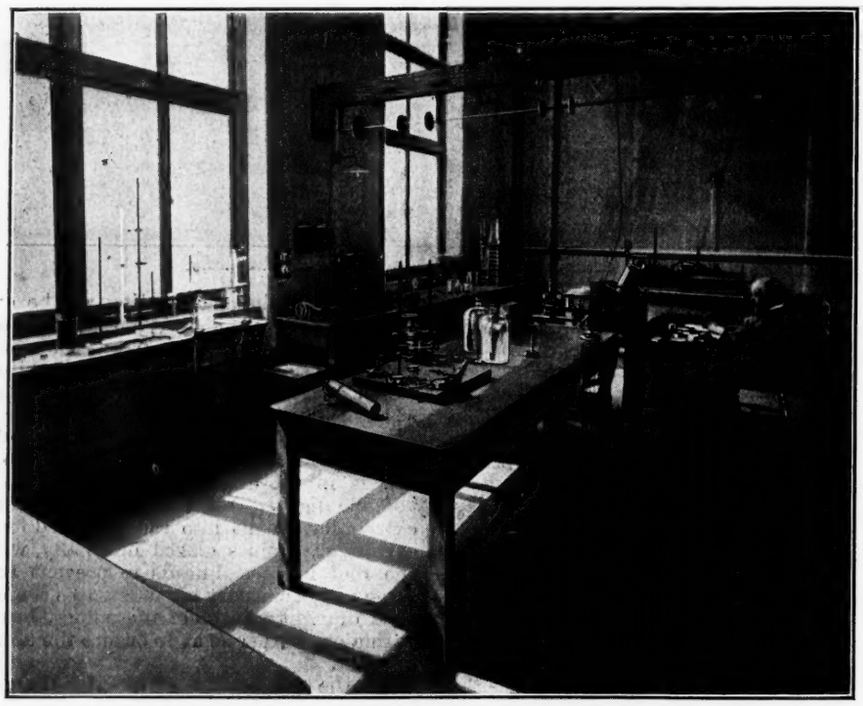


Fig. 4.—Laboratory for Physical Measurements (Dr. Bayliss).

The *Combustion Room* is provided at each side with a stone bench 3 ft. above the ground, 2 ft. wide, each with a stoneware sink 2 ft. 6 in. by 1 ft. 6 in. by 9 in., arranged so as to take two aspirators from gas reservoirs. The bench is set on glazed brick piers, and is supplied with large gas nozzles for combustion furnace. One of the bays below the bench on the east side is closed by a wrought iron sliding door, and is used for working with the tube furnace. Over each bench is a wooden hood lined with uralite, which conducts the gas fumes into a flue running directly to the top of the building. The floor is of cement.

The *Distillation Room* is provided on each wall with a lead covered bench with water and gas supply. The high

pressure supply is also carried to a sink near the window to allow for vacuum distillations. In this room we also find electric leads for supplying heaters. The floor is of asphalte on cement. On one wall is fitted a range of drying ovens combined with an apparatus for the production of distilled water. The window of this room, which opens down to the ground, leads on to a stone balcony for work involving the production of objectionable fumes, similar in all respects to that provided in the students' laboratory.

Fig. 5.—Students' Laboratory of Histology.

There is a small room for use as a *private office* by the head of the department.

Adjacent to it is the *Gas and Optical Room*, that is, a room where operations may be carried out involving the use of mercury or the use of instruments which cannot be exposed to the ordinary fumes of a laboratory.

The last room in this side, which adjoins the inner vestibule, is a small room with double doors which can be completely darkened for polarimetric work. The bench is fitted at one end with a small hood leading into an extract flue, so as to conduct away at once the fumes given off by the sodium chloride lamps which are ordinarily so destructive for all brass apparatus. This room is also fitted with small taps connected with a hot and cold water supply, so as to be able to lead a current of water at any desired temperature through or round any instrument where variations of temperature are desired. These three rooms last mentioned have floors of linoleum over cement.

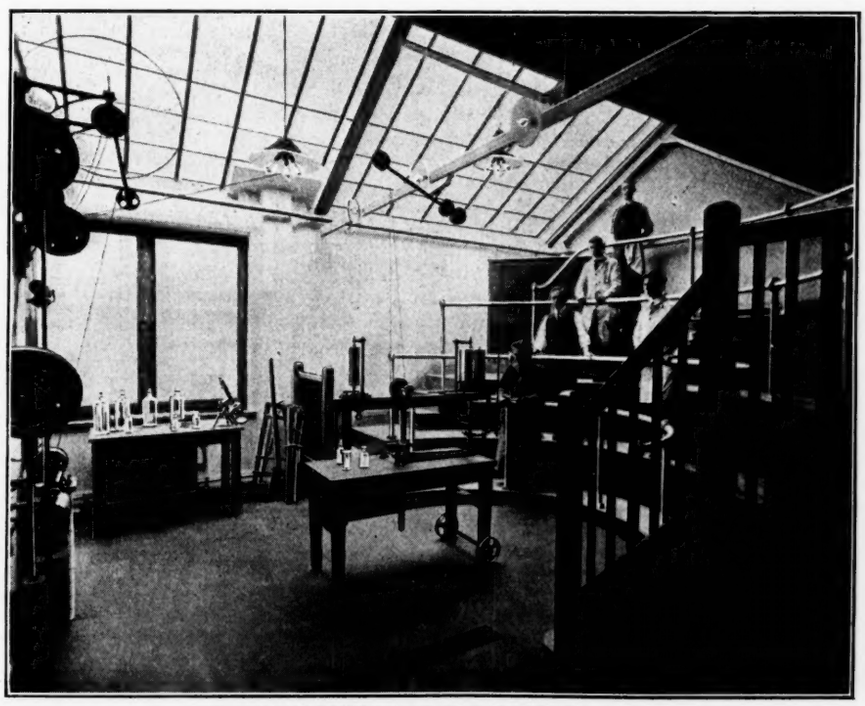


Fig. 6.—Demonstration Theatre.

Experimental Physiology.

The first floor is devoted to experimental physiology on the west side of the staircase, and mainly to the large theatre on the other.

The *Theatre* is 50 ft. long by 40 ft. wide by 19 ft. high. It has seating accommodation for about 200 students. It is entered by the students by a branch staircase from the first landing above the vestibule. The lecturer enters through a preparation room, which communicates on the other side with the professor's private room. The chief light to the theatre comes from three large windows on the north side, but light is also obtained from hemispherical windows placed high up on the south side. A passage 2 ft. wide is left between the benches and the north wall so as to allow of access from the building to be later erected for pharmacology. From this building, too, it will be possible to provide for a students' entrance to the benches from the back of the theatre. At present the theatre suffers from the disadvantage that students entering late have to pass the lecturer's table in order to get to their places.

The windows are provided with light-tight blinds which can be raised or lowered in twenty seconds by means of an electric motor, and set into action by switches on the lecturer's table. The lighting is by incandescent lamps from the ceiling over the auditorium, an intense light being thrown on the back of the theatre as well as on the table by a row of 1,600 c.p. metallic filament lamps fixed immediately over the table. At the back of the lecturer are three tiers of slates arranged so as to slide up and down in sashes and providing altogether six blackboards, each 5 ft. by 3 ft. There is a space of 10 ft. clear between the back of the lecturer's bench and the wall, thus providing ample room for the display of apparatus. There are two

lanterns, one with a small arc lamp by the south end of the table for the projection of ordinary lantern slides, the other the large epidiascope of lights at the north end, which takes a current of 30 amperes, and by which it is possible to show lantern slides in broad daylight, or in the darkened theatre solid objects or microscopic specimens.

The rest of the wall is occupied by two large diagram screens, which can be rolled up out of sight when not in use, and are composed of lathes attached to webbing, to which diagrams can be pinned or clipped.

The space between the theatre and the central well of the building is taken up with a preparation room and with a spacious dark room.

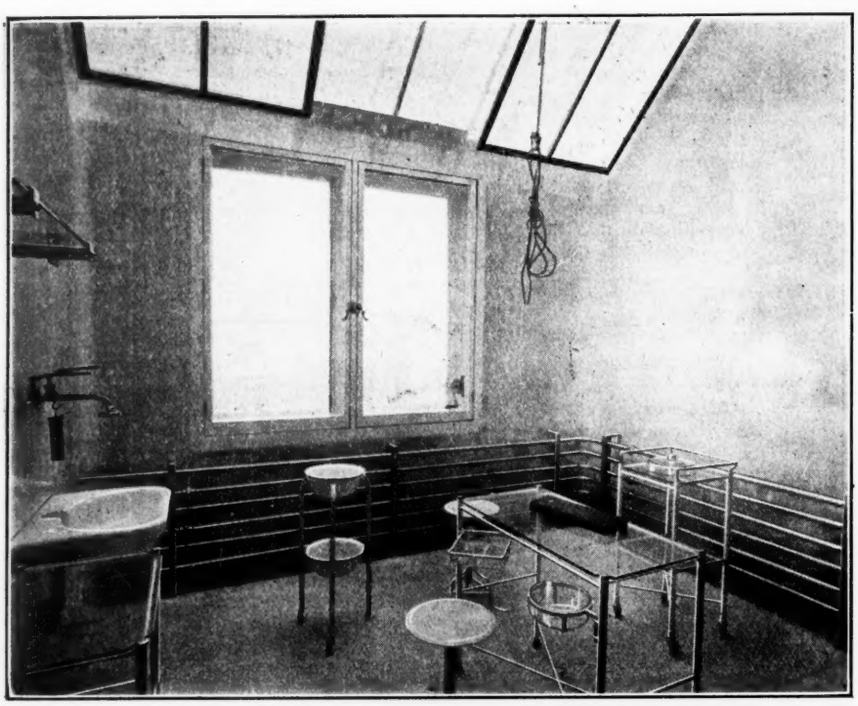


Fig. 7.—Aseptic Department: Operating Room.

Immediately in the middle of the building is the professor's private room.

The series of rooms on the west side of the first floor are known as the Thomas Webb Research Laboratories, to commemorate the legacy of £5,000 by Mr. Thomas Webb to the college for the purpose of research, which was devoted in accordance with his wish to the expenses of the physiology building.

On the north side are three rooms. Immediately opening out of the professor's private room is:

The *Departmental Library*, with shelving for about 4,000 volumes, where will be kept (at any rate until the completion of the whole Institute of Medical Sciences) the periodicals and works in the College Library dealing with physiology and cognate sciences. In the centre of this room is a long table on which are arranged the current numbers of the physiological periodicals.

Adjoining the library is the *Professor's Private Laboratory*, a room about 20 ft. by 20 ft., fitted with shafting and electric power and with a chemical bench along one side. Opening out of this, but approached also from the central corridor, is the *General Research Laboratory* (Fig. 3), 25 ft. by 25 ft., also fitted with shafting and motive power, a chemical bench, and a fume cupboard. In this room are two kymographs.

On the south side of this wing are three rooms, namely, one fitted out for accurate physical observations, and occupied at present by Dr. Bayliss (Fig. 4); a large room which can be completely darkened for optical experiments or for investigations involving the use of mercurial gas pumps; and a small workshop fitted with lathe and bench. The mezzanine floor between the first and second floors provides a cloak room for the ladies who are working in the laboratory, a lavatory and bath room for the staff, and a small room known as the committee room.

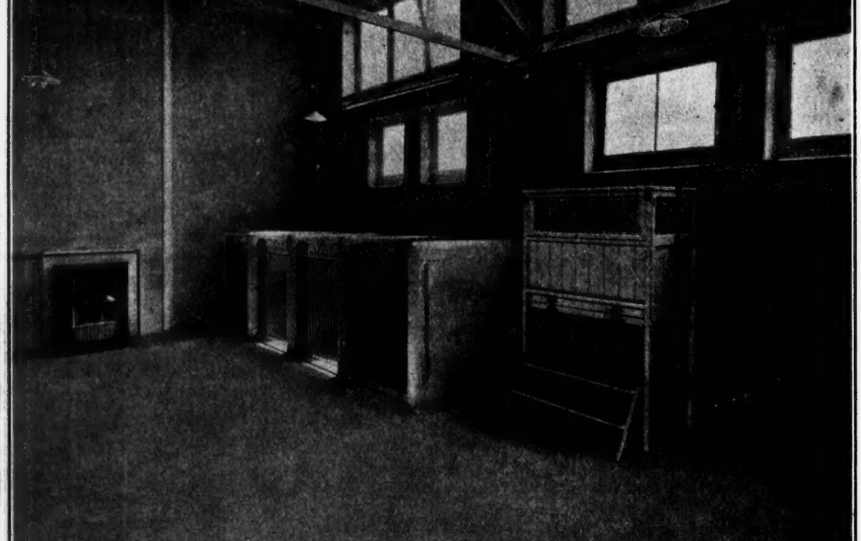


Fig. 8.—Aseptic Department: Animals' Hospital.

Histology and Neurology.

The second floor is devoted to the departments of histology, of neurology, and to the aseptic department. The whole of the west wing of this floor is taken up with a large students' classroom for histology and experimental physiology. This room (Fig. 5) is about 63 ft. by 42 ft., its height varying from 14 ft. at the sides to 20 ft. in the middle. It is brilliantly lighted by large windows at both sides, and by a continuous skylight along the whole of the north side of the room. It is fitted with working benches providing seventy places for students of histology. Each student is provided with a locker and drawer, with water, gas, and electric light. In addition there are five tables, each 8 ft. 6in. by 2 ft. 6 in

fitted up with shafting for experimental physiology. Three of the histology benches are also provided with continuous shafting, and space is left in the room for additional benches, which would provide another thirty-two places. The walls of this laboratory, as of the big chemical laboratory downstairs, are of glazed brick.

Adjoining this room, on the north side, is a preparation room for the teacher in charge of the histological students.

On the south side of this floor are the following rooms:

At the north side there is a *Demonstration Theatre* (Fig. 6). Here the benches, which present only standing room, rise rapidly in semicircular tiers, and are so arranged that forty students can obtain a full view of any experiment. This room is provided with a kymograph, artificial respiration, time mark, etc., with water and electric power, and is brilliantly lighted by windows as well as by the skylight. The rest of the rooms on this floor are devoted to research.

Adjacent to the demonstration theatre is a well-lighted room fitted up for histological research.

Opposite these rooms on the south side is the department devoted to the physiology of the nervous system. This includes three rooms: one for keeping monkeys; a large room fitted with benches, incubators, etc., for histological work; and a small room with skylight which can be used by the lecturer in charge of this branch of the subject.

Aseptic Department.

The east end of this wing, separated from the rest by a door in the passage, is devoted to the aseptic department. This includes four rooms. On the north side is a sterilization room, provided with a Manlove and Alliott steam sterilizer, and the necessary arrangements for the sterilization of instruments and the preparation of animals for operation (Fig. 7). There is also an operating room, provided with double windows so as to make the attainment of a high temperature possible. Instead of the ordinary radiators, the heating of the room is effected by means of nickel-plated copper tubes which run in loops round the walls at such a distance from one another that all accumulation of dust can be prevented. There is a wash-basin provided with hot and cold water supply, a glass shelf for antiseptic solutions, and a slate shelf with gas, at which a plentiful supply of warm sterilized normal salt solution can be provided. All the supply and waste pipes are taken straight out of the room through the wall, so as to avoid any chances for the accumulation of dust. The floor of this room, as of all the other rooms in the aseptic department, is of terrazzo, and the walls and ceilings are of adamant painted with ripolin enamel.

Between this room and the passage is a *Bath Room* for the preparation of animals.

On the south side of the passage is the *Animal Hospital* (Fig. 8), excellently lighted and ventilated, provided with four kennels carried out in glazed brick for dogs, and with ample space for cages for other animals.

Both this and the adjoining Monkey Room are provided, in addition to the steam heating apparatus, with gas stoves, which can be lit in the evening, so as to prevent any falling of temperature during the night.

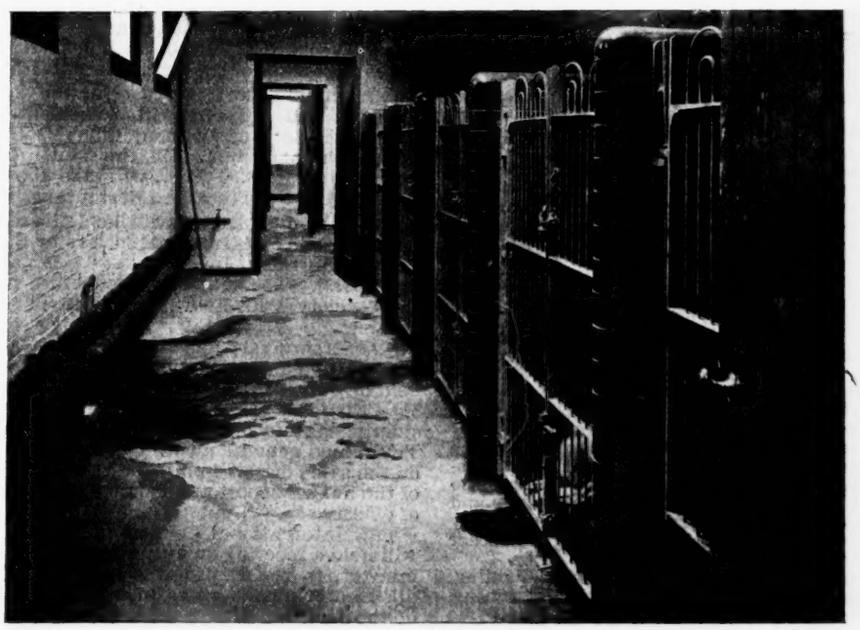


Fig. 9.—Sheds for Animals.

Refrigerating Chambers, Machinery, etc.

On the west side of the basement are a series of rooms which can be regarded as serving all departments of the building. Both sides of the basement are only just below ground level, so that they are excellently lighted. On the north side, next to the central roadway, is the *Refrigerating Chamber*, with thick brick walls in which is built up the chamber proper—two layers of wood with a packing of slag wool between. A space is provided for cold storage, about 6 ft. 6 in. by 10 ft. by 7 ft. 6 in. The chamber is lined throughout with zinc, so that it can be effectively disinfected, and is provided with an air-lock so as to diminish the access of warmth when it is necessary to enter or leave it. It is provided with large accumulative tanks containing calcium chloride solution, so that it may be possible to limit the running of the refrigerator to two or three hours daily.

Next to the refrigerating chamber is the *Machinery Room* containing the refrigerating machine, driven by a 5-h.p. electric motor. The counter-shaft of the motor is prolonged and geared on to two other sets of shafting, so that it is possible to obtain a large range of speeds for driving other apparatus such as centrifuges, grinding mills, etc. In this room are also contained the gas meter, the main tunnels and fuses of the electric supply, and the three switchboards from which light, power, and heating circuits are carried to the different parts of the building.

The end room on this side, which is lined with glazed brick, forms a *Fabrik-Raum*—that is to say, a room for working up material on a large scale. It is fitted with sink with hot and cold water, a slop sink with flush cistern, a large fume cupboard with stone bench, and an apparatus for the production of distilled water in quantity. The floor is of asphalte and is channelled so that the whole floor may be washed down with a pail of water, or the outflow may be provided from a table in the middle of the room.

On the south side of the wing are the following rooms:

The *Boiler Room*, containing two low pressure steam boilers, the vacuum pump for the heating apparatus, worked by a 3-h.p. electric motor, and the hot water boiler with a storing capacity of 250 gallons. Opening out of this is the *Coal Cellar*, and enclosure with *Destructor Furnace*. The latter is one of Horsfall's destructors, fitted for gas.

There are two *Store Rooms*, one for apparatus the other for chemicals.

Adjoining the staircase is an *Incubator Chamber*. It has double brick walls with an air space between, the interior one being of glazed brick. It is provided with a gas stove and temperature regulator on Hearson's principle.

On the east side of the basement are the following:

A *Class Room*, fitted with platform, blackboard, and benches for small tutorial classes. From the west end of this room access is obtained to the enclosure containing the lift machinery. Opposite this room on the south side are a series of lavatories for workers in the department. The end room on the north side is devoted to Comparative

Physiology. There is a room for the servants of the institute.

There are two dark rooms for photomicrography, etc. One of these rooms is provided with a masonry pillar with slate top, so as to provide a support free as far as possible from any vibration.

Sheds for Animals.

In the yard on the south side of the building, and extending as far east as the racquet court, is a building about 12 ft. deep by 76 ft. long, containing accommodation for animals (Fig. 9). It is divided up into a number of rooms, namely: (1) Small laboratory; (2) store room for food; (3) dog kennels; (4) rabbit room; (5) room for animal cages; (6) a room, with stone bench and gas, for the preparation of the animals' food. In this room is also situated the heating apparatus—a gas stove which warms a run of hot-water piping passing through the different rooms. There is a yard in which cats and other animals can take exercise.

The opening of the new Institute of Physiology will mark an important date in the evolution of scientific teaching in this country, and we look with confidence to Professor Starling and his associates for results corresponding to the splendid opportunities of research now open to them.

MOTOR CARS FOR MEDICAL MEN.

Cost of Running.

SWIFT AND SURE writes: As a user for over two years, may I stand up for the motor car in general and the little Swift in particular? For the man who values a little leisure in life over and above that spent in sleep, the motor is a veritable godsend, and surely he is prepared to pay a small sum for that sorely-needed commodity. Again, if he uses his car other than for his practice, he should be prepared to pay a little for that pleasure which is an extra.

To the general practitioner who tells me he runs 12,000 miles per annum in his practice, I cry, "Fudge." How many of us could stand cycling 40 miles a day? and yet most of us did our work upon the handy "bike" before taking to motors. My father and I have each of us cars with recorders, and I find that I average about 5,000 miles a year, and my father, who does about the hardest practice in this city, about 6,000 miles. As to tyres, I have all my original Dunlop tyres on the car, only two of them being retreaded, and this after 10,500 miles. My repair bill besides this has been confined to overhauling and renewal of brake bands. Most of the necessary work on a car can be done by any intelligent man who understands it. I have recently cleaned out my engine and ground in the valves in five hours. My car is running to-day almost as well as when I bought it, and if I bought another to-day it would be a "Swift."

The total expenses for last year, including garage, lighting, cleaning, warming, overhauling and some varnishing, insurance, oil and petrol—in fact, everything—totalled with me £78. Care and attention to one's car cuts down expenses out of all proportion to the time bestowed; and if doctors would read their cars as they do their patients, and relieve their little groans and squeaks, their repair bill—at any rate, in their early years—is practically negligible. Why, even my sparking plugs have been in for almost two years!

If the medical man wishes to economize on his car, let him get a two-seater with big tyres. It is the man who buys a large-bodied car and takes his family all over the country, driving on small tyres, who grumbles, and he forgets that his wear and tear is accomplished in the time which is not concerned in his practice, and the useless weight he carries around with him when it is.

Medical Bag on Motor Cycle.

DR. Q. R. DARLING (Eardisley, Hereford) writes: In reply to "J. D.'s" query in the BRITISH MEDICAL JOURNAL, June 5th, p. 1365, after fifteen years as a medical cyclist, I can strongly recommend "Turner's Bi-carrier" on back of cycle, and Lucas's "Bundle Carrier" on handle bars. These will carry a large quantity of luggage and not be found to interfere with the riding, as a bag carried on the top bar.

Steam Cars.

R. E. E. asks for notes of experience of the upkeep of steam cars, say Stanley 10 h.p., their advantages and disadvantages.

Town and Country.

DR. AMBROSE ATKINSON (Green Lanes, Hornsey, N.), writing as a town doctor, emphatically advises any medical men contemplating changing from horse to motor not to do so. The motor for a general practitioner in a town is, he considers, a constant and serious source of anxiety. He offers to give any one thinking of making the change from horseflesh to motor the benefit of his pecuniary experience.

Medical News.

THE King has been pleased to grant permission to the undermentioned gentlemen to accept the decorations stated against their respective names which have been conferred upon them on the nomination of the Khedive of Egypt in recognition of valuable services rendered by them: Henry Pottinger Keatinge, Esq., M.B., F.R.C.S., Director of the School of Medicine and of the Hospital of Kasr-el-Aini, the Imperial Ottoman Order of the Medjidieh, Second Class; Frank Cole Madden, Esq., M.D., F.R.C.S., Professor at the same School of Medicine, the Order of the Medjidieh, Third Class.

DR. AENEAS JOHN MCDONNELL, of Toowoomba, has been appointed a member of the Queensland Medical Board.

AT a meeting of the Royal Microscopical Society, 20, Hanover Square, on Wednesday next, at 8 p.m., Dr. J. A. Braxton Hicks will give an exhibition of the better known tropical parasites.

THE honorary degree of LL.D. was conferred upon Professor C. S. Sherrington, Professor of Physiology in the University of Liverpool, at the graduation ceremonial of the University of Glasgow, on June 8th.

AT the meeting of the Medical Society of the State of California, held recently at San José, Dr. James H. Parkinson, of Sacramento, was elected President for the ensuing year. Dr. Parkinson holds British qualifications, and is a member of the British Medical Association.

THE annual general meeting of the Society of Tropical Medicine and Hygiene will be held at the rooms of the Medical Society of London, Chandos Street, on Friday, June 18th, at 5 p.m. On the same evening Professor Ronald Ross, C.B., F.R.S., will take the chair at a dinner to be held at the Trocadero Restaurant.

THE Cavendish lecture will be delivered before the West London Medico-Chirurgical Society by Sir Victor Horsley, F.R.S., on Friday, June 25th, at 8 p.m., at the Kensington Town Hall. The subject of the lecture is the cerebellum. The society will hold its conversazione on the same evening.

AN extraordinary general meeting of the members of the London and Counties Medical Protection Society will be held on June 23rd, at 3.30 p.m., at the offices of the society, 31, Craven Street, Strand, W.C., for the purpose of considering certain alterations in the articles of association. The annual general meeting of the society will take place on the same day at 4 p.m. for the reception and adoption of the annual report and balance sheet and for the election of officers.

THE International Council of Nurses, founded in 1899, will hold a meeting on July 19th at the Caxton Hall, Westminster, to report progress and to receive reports from different countries upon questions relating to the welfare of the sick and of the nursing profession. Following the business meeting of the International Council an international congress of nurses and nursing exhibition will be held at Caxton Hall on July 20th, 21st, 22nd, and 23rd.

AN the Conference of the National Federation of Hairdressers, which was recently held at Scarborough, rules enjoining strict cleanliness on all working in barbers' shops were adopted. A special committee has been appointed to deal with all questions relating to "foul-shave" charges, "barber's rash" advertisements, and also to approach the British Medical Association with the view of inducing them to use the correct term of "tinea sycosis" instead of "barber's rash" or "foul shave."

THE sixth annual course on ophthalmology in connexion with the University of Oxford has been arranged from July 5th to July 17th. The main idea of the course is to demonstrate—on actual patients as far as possible—the whole range of ophthalmology in order to make the reading of a textbook more profitable than can be the case when relying merely on pictures. The first part will be mainly devoted to demonstrating the practical examination of eye patients, the use of the ophthalmoscope and the work of refraction. During the second part the work will be more specialized and the lectures delivered by various ophthalmic surgeons. Altogether some 500 cases will be available for demonstration. The fee for the course is £5 5s. Gentlemen attending it will be provided with board and residence at Keble College at the rate of 7s. 6d. a day during the second week, but during the first week lodgings must be secured. Further particulars may be obtained from Mr. Robert W. Doyne, M.A., Margaret Ogilvie Reader in Ophthalmology in the University of Oxford, 30, Cavendish Square, London, W.

British Medical Journal.

SATURDAY, JUNE 12TH, 1909.

THE MODERN TREATMENT OF FRACTURES.

THE address delivered at Cardiff by the President of the International Surgical Society, Dr. Lucas-Championnière, which we publish elsewhere, is important not only because of the occasion, but still more because of its subject and of its author. The occasion was noteworthy, seeing that it was that of the public expression of sympathy with Drs. Lynn Thomas and Skyrme by practically the whole of the medical profession in this country and by many distinguished foreign surgeons. It was at the same time a protest against the decisions of judges and juries, who have shown themselves quite incapable of understanding or appreciating the technical evidence given by a number of surgeons of the greatest skill and experience. The best thanks of the profession are due to Dr. Lucas-Championnière for once more testifying to the skill of our colleagues and to the brotherhood of surgeons of all nations. The matter of his address is of yet greater importance, and we trust that it may have the effect of arousing those British surgeons who have not already tried early massage and movement to the necessity of reconsidering their treatment of fractures.

For a generation Dr. Lucas-Championnière has been working at this subject, but he himself gives the year 1884 as that in which he first began the systematic treatment of fractures by massage and early mobilization. It needed no little courage to denounce the time-honoured methods of fixation, which have come down to us from before the dawn of history. Dr. Lucas-Championnière had to face a storm of criticism from some of the best surgeons of the day, but he met it without flinching, and in paper after paper read at the Paris Surgical Society and elsewhere he opposed facts and an ever-growing experience to *ex cathedrâ* statements of time-worn principles and *a priori* objections, until he won recognition for his methods. It is now not too much to claim that by early massage and mobilization the time of treatment of many fractures may be shortened by one-half; and, what is still more important, that the pain and disability which too often remain after so-called cures may be enormously lessened, especially in the case of fractures near to or involving joints, such as Colles's and Pott's fractures, to quote two of the commonest and most disabling of these injuries.

Dr. Lucas-Championnière, who was one of the earliest and most strenuous advocates of antiseptic surgery in France, paid a graceful tribute to Lord Lister's genius when he said that it was largely owing to his example as an innovator that he was led to question the time-honoured principles of immobilization. We fear that it may be somewhat disappointing to our distinguished guest to find that comparatively few surgeons in this country have learnt the lessons which he has been teaching for more than thirty years. It should be some consolation to him to reflect that the teaching of our own great countryman was but slowly accepted by us, and that a new method of treatment coming from abroad is even less readily adopted, despite the proverb concerning the honour of a prophet in his own land. Dr. Lucas-Championnière's visit and address on such an occasion should go far to disturb the self-satisfaction which has been content with ancient ways, and it should stimulate the wider use of a method which has brought forth such good results in the hands of those who have given it a fair trial. Of the latter, Sir William Bennett, the latest edition of whose book is reviewed in this issue, is a notable example, one whose ripe experience and sound judgement ought to have great influence with the profession at large.

Stare super vias antiquas may be far easier than to leave the beaten track and explore new country; and it must be confessed that the old plan, which Professor G. Elliot Smith has shown was in use in Egypt some five thousand years ago, of "setting" a fracture, fixing it as firmly as possible in some apparatus and leaving it there till the time believed to be necessary for consolidation has passed makes fewer calls upon the attention and skill of the surgeon than does the treatment by massage, which needs constant supervision if it is to produce the best results. Those, however, who are willing to acquire such skill and to give such attention will be well repaid by the gratitude of their patients and the satisfaction of doing good work.

Dealing with another side of the question, Dr. Lucas-Championnière did well to insist upon the advisability of employing x rays in the course of the treatment of fractures; he did well also to point out the limitations of the method and the false conclusions to which it may lead inexperienced persons. He has himself published an essay on the errors of radiography, and in this country numerous papers on the subject have appeared in our columns and elsewhere, which show the many sources of error in the interpretation of plates and prints. Every surgeon, when called upon to treat a fracture, would do well to adopt the precaution, when possible, of having radiographs taken, not so much for his own guidance as for his protection against subsequent accusations by the patient or his friends. We say advisedly radiographs, for no one should be satisfied with less than two, taken if possible in planes at right angles to each other, for it is not uncommon to find that a plate taken from one point of view may represent perfect reduction, while one taken from another point may show both angular deformity and overlapping of bones.

Dr. Lucas-Championnière also very wisely insists that patients and their friends should not be invited to inspect the negatives, the unfamiliar appearances of which may lead to strange errors and consequent complaints of wrong treatment. It is the duty of the profession to educate the public to the extent that it shall know and admit its own unfitness to interpret radiographs, and at the same time to awaken it to a consciousness that the treatment of many fractures has of late years been radically reformed. The weighty utterance of the President of the International Surgical Society ought to give fresh impetus to our efforts in this direction, and we trust that by practising his methods British surgeons will show their appreciation of the graceful tribute of fraternal homage which, to use his own words, he has offered us.

THE MEDICAL TREATMENT OF SCHOOL CHILDREN.

ONE of the most important matters to be considered by the Annual Representative Meeting is the medical inspection of schools and the practical consequences that must logically follow on the adoption of that necessary addition to our system of State-aided education. The principle that all children in Board Schools should be medically inspected is excellent in itself, but the mere recognition of disease or physical defect does not take us very far. Provision has to be made for treatment, and here a serious difficulty meets the social reformer. Where and by whom are the children found on inspection to be diseased or defective to be dealt with? The first thought of the administrative authorities is to save expense, and therefore they—naturally from their point of view—look to the hospitals. For this the hospitals themselves are mainly responsible, for they have accustomed the public as well as the profession to believe that they gladly suffer all manner of patients to throng their out-patient departments, as they go to swell the number of attendances and thus help to make a good case for support in their periodical appeals to the charitable public. It was inevitable that this solution of the problem should not commend itself to the great mass of the medical profession in large towns, which already finds the hospital out-patient department a most damaging competitor in the struggle for existence.

As our readers know, the matter has received the closest attention from the Medico-Political Committee of the Association, and, as occasion arose, it has been dealt with in the JOURNAL. A report on the subject to the Divisions by the committee was published in the SUPPLEMENT of May 15th, and the recommendations are on the Agenda of the Representative Meeting (see SUPPLEMENT, May 22nd, p. 271). It may not be out of place to recall here the principal of these. Briefly, it is recommended that the Association should oppose the reference of such children to public medical charities for treatment; that there is no objection to treatment by provident dispensaries or other contract practice organizations, provided the practitioner who carries it out is adequately paid for his work; that the Association should oppose any scheme for treatment which involves reference of the children to the Poor Law pending such reforms as may result from the consideration of the reports of the Royal Commission. It is further recommended that, under existing conditions, the most satisfactory provision for the treatment of children whose parents cannot afford to pay for it, is to place them under the care of private practitioners, who should be adequately remunerated out of public funds independently of the Poor Law. In sparsely-populated districts, the committee recommends that the surgeries of private practitioners should be recognized as places where the children may be treated at the public expense; and that in towns the work should be entrusted to private practitioners, who should treat the children, either at convenient centres (designated "school clinics") situated in the schools or in independent buildings.

In London the question has become one of urgent importance, as the County Council has recently adopted provisionally a proposal made by its Education Committee to invite the hospitals to become in this respect a part of a State Medical Service. A Special Subcommittee appointed by the Education Committee, consisting of members of the London County Council or of the Education Committee, and of experts and representatives of outside institutions, whose report was published in the BRITISH MEDICAL JOURNAL of December 26th, 1908, p. 1869, after full consideration of the subject recommended that, for children suffering from physical defects not requiring operative or in-patient treatment, the Council should establish school clinics at suitable centres in the metropolis. A Minority Report recommending that the Council should utilize for the purpose existing types of institutions, giving financial help, if necessary, and receiving special facilities in return for any grant of public money, was published in the same issue. At a meeting of the London Education Committee, when the reports were presented, the temporizing conclusion was come to that, in districts where there is no prospect, within a reasonable time, of utilizing existing institutions, the Council should itself make suitable provision "if thought desirable." Since then the Council has decided to secure treatment for the children by utilizing existing institutions and making grants in return from public funds. The governing bodies of some of the hospitals have, we believe, given their assent to this scheme, apparently without consulting the medical staff, on whom it is thus proposed to throw additional work. At other hospitals the matter is still under consideration. For this work the hospital will be paid, but, as far as the medical staff is concerned, it seems to be expected that virtue will be its own reward.

In connexion with this subject we would call the attention of the London County Council to a document, published in this issue (page 1462), in in which the Court of Governors of the Royal Hants County Hospital has expressed its feeling that, "having regard to the heavy demands that are made "upon their staff, they would not be justified in "allowing general treatment of the numerous cases "that must arise as the result of the medical inspec- "tion provided by the Act referred to, and they desire "to suggest that the Local Education Authority "should, before these questions arise, proceed to make "arrangements for the discharge of these duties by "the medical men in their respective districts, which "they have ample powers to do."

Against the proposal made by the London Education Committee, a strong protest has been made by the Metropolitan Counties Branch in a letter sent to all the members of the staffs of London hospitals. In that letter the case is put with lucidity and force. Reference is made to the enormous number of children found defective on medical inspection; it follows that provision must be made for the treatment of diseases of the eyes, ears, throat, teeth, and other obvious defects, and this, in the words of the letter, "involves "a large increase of the unpaid work already done for "the community by the medical profession."

It is the duty of the State to do its utmost to prevent the physical deterioration of its citizens, on whose efficiency the future of the nation depends. But the State has no right to do this at the expense of medical charities supported by voluntary contributions—still less by making further exorbitant demands on their medical staffs. The Education Committee, in fact, proposes to create a new form of hospital abuse which will not only intensify the feeling of the general practitioner on the subject, but will inflict a cruel wrong on the children. Abundant evidence was obtained by the Day Schools Committee, the report of which was published as an

appendix to that of the Special Subcommittee already referred to,[1] showing that it was impossible for the hospitals to deal adequately with the very common forms of childish defects (vision, hearing, ringworm, teeth), while they found it equally difficult to dealt with chronic cases requiring prolonged treatment, such as tuberculosis. The map of the County of London, including the City, showing the educational administrative areas, the number of school children in these areas, and the position of general and special hospitals, provident and free dispensaries and Poor Law infirmaries, published in the JOURNAL of January 9th, shows at a glance that the institutions for medical relief are to a large extent grouped in the central districts. It is obvious that this fact alone makes it practically impossible for vast numbers of the children within the area of jurisdiction of the London County Council to be taken to the hospitals at all. In the case of many children, the loss of time caused to parents or others by taking them there will deprive them of the opportunity of being treated. In the case of those who are taken, the difficulty of transport, with the exposure to weather and other possible mischievous influences, the length of time they have to wait before being seen, and the perfunctory manner in which, owing to the already overcrowded state of the out-patient departments, it is likely they will have to be dealt with, made up a combination of factors calculated to render the treatment nugatory, if not worse.

We have reason to believe that a considerable number of the members of the staffs of London hospitals are in agreement with the views expressed in the letter of the Metropolitan Counties Branch. Some may be expected to dissent, because the smaller schools find it not an altogether easy matter to get a sufficient number of cases which can be used for teaching purposes. But the interest of the public which subscribes the money for their maintenance must prevail over that of any hospital school; and the welfare of the children must be placed before everything else. The only satisfactory solution of the question is, in our opinion, to be found in the establishment of school clinics in large towns, and in the recognition of the surgeries of private practitioners in rural districts. In either case adequate remuneration of those who do the work is an essential condition which should be insisted upon with the united strength of the whole medical profession.

[1] BRITISH MEDICAL JOURNAL, January 9th, 1909, p. 96.

INTESTINAL STASIS AND TOXINS.

TWO distinguished British authorities, Sir Lauder Brunton and Mr. Arbuthnot Lane, have recently made public their views on the pathology and treatment of certain well-known chronic affections of the large intestine. Mr. Lane's address (p. 1408) deserves the attention of all who practise or teach medicine—the physician, the surgeon, and the obstetrician alike—for he discusses the cause of a condition familiar to them all. He observes that, while constipation is the most frequent objective evidence of unsatisfactory drainage associated with chronic intestinal stasis, it happens not uncommonly that there may be a daily evacuation or even diarrhoea. He insists, after relating the general changes which aid in the diagnosis of chronic intestinal stasis, that the symptoms are due in part to interference in the normal functioning, expressed by pain, and in part to absorption of poisonous material, evidenced by toxaemia. The chief toxic symptoms, Mr. Lane reminds us, are headache, a feeling of mental and physical lassitude, an inability to perform the ordinary duties of life, mental misery and distress, nerve symptoms comprised usually under the term of "biliousness," and a want of control over the temper which renders these patients unhappy themselves and the cause of unhappiness to others.

Mr. Lane's conclusion that when the stage has been reached in which owing to delay in evacuating its contents the large bowel has not only ceased to perform a useful function, but has become a source of danger, its removal from the drainage scheme will be of great service to the body, will seem to many very bold, but if the long catalogue of evils which he attributes to intestinal stasis and the consequent absorption of toxins is proved, then it is obvious that the drastic remedy he advises must not be ruled out of court merely because of its boldness. Sir Lauder Brunton in a recent paper[1] insists on the importance of intestinal toxins produced and absorbed as a consequence of chronic colitis. He tells us that he has lately been struck by the frequency with which patients suffering from chronic colitis complain of being always tired—a symptom which he has found to be diagnostic in more than one doubtful case. We are here reminded of the feeling of mental and physical lassitude which Mr. Arbuthnot Lane signalizes as an essential indication of chronic disease of the large intestine. Mr. Lane ascribes the lassitude to toxic agencies; and Sir Lauder Brunton says that whereas he was once inclined to attribute the lassitude to the absorption of peptones or albumoses from the intestinal canal, the recent researches of Weichardt have led him to the conclusion that the weariness is more probably due to toxins formed by microbes. During the breaking down of albuminous molecules toxins may be produced possessing a special property of causing fatigue. Weichardt has shown that fatigue toxins can be expressed from exhausted muscles and made to produce fatigue in other subjects into which they are injected. On the other hand, fatigue antitoxins may be produced in the same way as other "anti" bodies—by the injection of small quantities into a horse, the dose being gradually increased until a great power of resistance has been obtained. Weichardt asserts that fatigue toxins can be completely antagonized by the administration of fatigue antitoxins, which afford the tissues a far higher degree of resistance to fatigue than they normally possess. Sir Lauder Brunton suggests that Weichardt's researches may solve the mystery of beef-tea and beef juices, which contain little nutritive material but yet possess a very considerable stimulant action. The meat juice, according to Weichardt's teaching, supplies a fatigue antitoxin, and is not simply a mild, second-rate nutrient, for its active power in removing or preventing fatigue seems to be altogether out of proportion to its nutritive value. Sir Lauder Brunton admits that he can give no rules for the administration of medicaments which will bring about the development of fatigue antitoxins, but he thinks that the introduction of large quantities of the lactic acid bacillus into the intestine, as suggested by Metchnikoff, acts by destroying the bacilli which produce fatigue toxins. As a practical physician, the same

[1] On Chronic Colitis as a Cause of Fatigue. *St. Bart's. Hospital Reports*, vol. xliv, p. 1.

authority dwells on the advantages of eliminative, as opposed to tonic, treatment in cases of chronic colitis. Iron and strychnine often fail, he reminds us, adding that Byron found a dose of Epsom salts more stimulating to the brain than a glass of champagne. Old-fashioned purgatives remove the sense of weariness present in many cases of intestinal catarrh, a fact quite familiar to the experienced practitioner. A small dose of castor oil, repeated every morning, is, Sir Lauder Brunton thinks, the best remedy for chronic colitis, although a subsequent course of intestinal irrigation at Plombières, or elsewhere, may be necessary. As Sir Lauder Brunton refers to Byron, we wonder what that noble but wayward bard, who sang of those sodas and magnesias which form "that bitter draught the human species,"[2] would have thought and written of the possible developments of fatigue antitoxins, a tragic theme to all who with unbashful forehead woo the means of weakness and debility, as Adam says in *As You Like It*. Perhaps we may be prophets, and foresee a race who, with foreshortened colons, will forswear alcohol and carouse with elegant brews of fatigue antitoxins, abusing the latter as much as our own forefathers spoiit themselves with the former.

THE FINANCE BILL.

THE Finance Bill has now been published, and it has been possible in an article published at page 1429 to gauge more exactly than before how the Budget this year will affect medical men and the profession of medicine should the proposals made be accepted by the Houses of Parliament without material modification.

The taxation on motor cars as apart from motor cabs, omnibuses, and vehicles for carrying goods, has already been discussed in these columns. As medical men are to be allowed a rebate of one-half, the taxes in their case will be: For cars not exceeding 6½ h.p., 21s.; not exceeding 12 h.p., 31s. 6d.; not exceeding 16 h.p., 42s.; not exceeding 26 h.p., 63s. There are higher rates for higher powered cars, but these need not be considered, since few, if any, medical men buy for purely professional purposes cars which, when measured according to the Royal Automobile Club formula, exceed 26 h.p. So far, therefore, medical men may congratulate themselves. It is otherwise with regard to the petrol tax. This in their case, as in that of all users of petrol-driven cars other than cabs, omnibuses, and trade vehicles, will be 3d. a gallon. Mr. Lloyd George has consented to receive a deputation on the subject, and it is possible that medical car users may still be put upon the same terms as cab, omnibus, and trade vehicle owners.

The income tax proposals work out exactly as indicated in the article published in this JOURNAL on May 8th; the injustice of regarding an income derived from inherited property and one resulting from the provision for old age made by the individual himself as of precisely the same character, remains unremedied. Exemption from income tax, and even the ordinary rebatements made in the case of income tax under £700, are no longer to remain in the case of persons resident abroad. This will make a material difference in the case of a medical man who, having spent his working life in a tropical climate, wishes after retiring to reside in Southern Europe or elsewhere in a climate which suits him; by living abroad he forfeits his right to exemption or rebate, and in the case of a man who retires on a pension or other income of about £400, this new regulation will mean a choice between endeavouring to live on about £375, less any local income tax, and taking his chance in England.

The effect of the new proposal with regard to estate and legacy duties is not easy to determine; but in the case of estates which for probate purposes are regarded as exceeding £15,000 in value the additional payments will clearly be very heavy. With regard to smaller estates, such as those commonly left by medical men, one might suppose at first sight that the effect of the new regulations will work out favourably; but on examination it is found that the bill takes away with one hand what it apparently gives with the other. The only way to determine the net result is to take a number of hypothetical estates of small value and calculate what they would pay under the present regulations and under those now put forward. It then becomes clear that the sums which in future medical men will have to accumulate for the benefit of their children will have to be materially greater than the sums which they at present aim to leave behind them if they wish their children to obtain the same benefit as they would have received heretofore. A medical man, for instance, who dies leaving an estate of £7,500 which he desires to tie up in some fashion for the benefit of his daughters may safely count upon the Government relieving them of the care of practically the whole of the odd £500, if not a good deal more.

All transfers of property will entail a very much heavier expenditure in stamps than hitherto, but the new taxation on supposed incremental values of land—unlikely to affect the majority of medical men—will not be operative in the case of hospitals and some other institutions. The same is true of the clauses which render liable to taxation gifts of real or personal estate made within five years of the death of the donor.

The taxes hitherto mentioned may be regarded as affecting individual medical men rather than the profession of medicine as a whole. It is the reverse with the increased imposts on alcohol and the taxes mentioned in the second section of the third schedule to the Act. Taking these together, it may be said that they will work out very hardly in the case of a great number of individual medical men, that they will do something towards increasing the financial difficulties of many hospitals, and that they will handicap every medical man in the performance of his work. As regards the first point, the increased taxation of potable spirits of every kind, and whatever their purpose, will make it more difficult for medical men engaged in contract practice and obliged by their agreements to supply medicines as well as advice to fulfil their obligations without direct loss. As regards hospitals, their dispensary bills, which are already very heavy, will be gravely increased both by the additional price of alcohol and the imposts on chloroform, ether, collodion, ethyl chloride, and other like drugs.

As for medical men as a whole, they perhaps need not worry, because their better class patients will be charged higher prices for medicines containing or prepared with alcohol by pharmacists, but they will be puzzled how to deal with those whose means they know to be strictly limited. It is always difficult to combine scientific soundness and practical feasibility in the advice given to such patients, and medical men will be still further handicapped in their task when medicines have to be chosen into the preparation of which little or no alcohol enters. When in-

[2] *Don Juan*, Canto X, 1°.

creased taxation becomes necessary, it is always on the poorer members of the community that the new burdens press most heavily in the long run. This is probably inevitable, but it might have been expected that the public would be spared in the special direction under consideration. In particular, the taxes on chloroform, ether, and other alleviators of pain and distress seem to us simply wicked. A benevolent and far-seeing Government will kindly abstain from charging the purchaser of a gallon of whisky more than 15s. odd for a carouse for himself and his friends, but if in the hope of saving his fellows from horrible agonies a man buys the same quantity of ether it will mulct him to the extent of £1 16s. 6d., adding about 7s. to that sum if his choice falls on chloroform. It has thus been reserved for Mr. Lloyd George to suggest a variation of one of Shakespeare's most familiar sayings: "The quality "of mercy is not strained but it shall be heavily "taxed."

It is expected that the opposition to the Finance Bill will centre round the land clauses, which introduce taxes of a novel kind, and to which many persons are bitterly opposed. As these clauses have been placed in the forefront of the bill, the fight may be expected to begin in earnest as soon as the Committee stage is reached, and it is probable that provisions more nearly affecting the medical profession will not be reached for several weeks or even months.

HYGIENE AND TEMPERANCE IN THE PRIMARY SCHOOLS.

THE British Medical Association comes in from time to time for a good deal of criticism, and for our part we do not think that this is a matter for regret. Any man or organization which does things is certain to be criticized; they will be criticized by people who are fond of quoting Lord Melbourne's interrogatory response, Why not leave it alone? they will be criticized by people who really believe that mistakes are being made; and they will be criticized by those intangible folk who say that they quite approve of the purpose, but object to the means taken to bring it about. But things cannot be left alone when they are evil in themselves, and the seeds of worse evils in the future. Over thirty years ago Parliament, in response to the demands of an unmistakable public opinion, enacted that education should be compulsory for all, and naturally enough the first idea of educationalists, having caught our young barbarians of the poorer classes, was to give them an education in books, modelled so far as it could go on the book education given to the wealthier young barbarians. The statistics of recruiting, rubbed into the public mind by the unfortunate incidents of the Boer war, aroused the country to a consciousness of the fact that all was not well with our system of elementary education, that it was grossly defective in that no attempt was made to inculcate the first principles of personal and domestic hygiene, nor to promote physical development by suitable training, and the removal of causes of physical deterioration. This, then, was one of those things which could not be left alone, and we believe that for once in a way the British Medical Association escaped criticism when it stood forward as the exponent of medical opinion on the subject. It did this in many ways, but we are now only concerned with the representations it made to the Board of Education five years ago as to the urgent importance of giving elementary scientific instruction in health subjects, including temperance, in all primary schools. A resolution to this effect, adopted by the Central Council and subsequently approved by the Representative Meeting, was submitted to the President of the Board of Education on behalf of the British Medical Association, by the then President, Dr. Griffiths of Swansea, who was one of the Representatives of the Association who took part in the deputation which went to the Board in July, 1904. The official response on that occasion was indecisive, stress being laid upon the difficulty of providing teachers adequately equipped to give instruction in hygiene and temperance. The efforts of the British Medical Association and of its JOURNAL to instruct public opinion were, however, not remitted, and the institution of compulsory medical inspection by the direct act of the House of Commons put the matter on another plane. In the Annual Report of the Board of Education issued last March, it was stated that a new syllabus in hygiene had been framed for students in training colleges, and that the Board's final examination for its students would in future include a paper in hygiene containing questions based on this syllabus. We are now able to announce that the Board has taken a further step forward. It has issued a syllabus of lessons in temperance for scholars attending public elementary schools, which we are enabled to publish in the SUPPLEMENT for this week. The Board directs that in future this syllabus shall be used by all teachers in public elementary schools, and suggests that at least three lessons in the subject should be given to the children in each school year. This, of course, is not very much, but it is a beginning, and the prefatory note rightly points out that the teachers on the staff of the school will find frequent opportunities, apart from the regular lessons, of impressing upon the scholars the importance of habits of self-control. The syllabus, it will be seen, is drawn on thoroughly practical lines; the first section deals with the subject of food and its use, including the use of beverages, with a brief reference to the fact that alcoholic beverages contain little or no real food substance; the second gives some account of the effects of alcoholic beverages on the body; and the third, intended only to be used in the instruction of children over twelve years of age, sets out more in detail the evil consequences of intemperance to the individual, to the home, and to the State. The prefatory note rightly impresses upon the teachers the impropriety of exaggerated statements, and directs that the instruction should be of a kind to make a sober appeal to such reasoning capacity as a child possesses, and to the ideas of decent, self-respecting, and dutiful living which every good teacher endeavours to present to and to cultivate in the children under her charge. The Representative Meeting at Caxton Hall in 1906 urged as one of the reforms most urgently necessary the establishment of a medical department within the Board of Education, and pressed the matter upon Mr. McKenna, the then President of the Board. This recommendation was carried out by Mr. McKenna in 1907 by the appointment of Dr. George Newman to be chief medical officer to the Board of Education. We may look upon the syllabus to which we have referred as one of the firstfruits of the expert advice which the Board has received in this way and as a proof of the great value of the creation of a medical department.

THE ANNUAL MEETING.

IN the SUPPLEMENT for May 22nd was published the provisional agenda paper for the Annual Representative Meeting this year, and in the SUPPLEMENT for this week will be found the programme of the Annual

General Meeting of the Association and its fifteen Sections, which begin their sessions on Wednesday, July 28th. In some instances it has been possible to publish brief synopses indicating the scope of the remarks by which the subjects selected for discussion will be introduced. That it is not possible to do this in all cases is a matter of regret, and we would appeal to those gentlemen who have not yet complied with the requests addressed to them to do so at the earliest opportunity, for there can be no doubt that a discussion is usually more fruitful and interesting if those who take part in it have had the opportunity beforehand of considering the line of argument to be followed. Elsewhere in the JOURNAL will be found the third of a series of articles of a general character dealing with the arrangements for the meeting. The first article, published last December, contained a description of Belfast, its public buildings and trade; the second, published in January, described its college and hospitals; the third, which appears this week, gives some account of the surroundings of Belfast and the opportunities for recreation which the north of Ireland affords. All these articles have been copiously illustrated by the reproduction of photographs supplied to us by Dr. Cecil Shaw, of Belfast, and for the most part specimens of his own skill as a photographer. In a later article it is intended to give a general account of the arrangements and entertainments, the train service, short excursions round the city, and some particulars regarding the journey from London, the north and south-west of England, Wales, and Scotland. In a recent issue we stated that there was reason to believe that an invitation would be received to hold the annual meeting of 1911 in Birmingham, and of 1912 in Liverpool, but that nothing had been definitely settled with regard to 1910. We understand that a plan with regard to that year is under consideration, and that it is possible that an announcement on the subject may be made at an early date.

SPIRITUAL HEALING.

IN the *Transvaal Medical Journal* for March we find a typical example of the utter disregard for truth often shown by patients who testify to cures supposed to be wrought in them by spiritual healers. Dr. Arthur G. Brinton, of Johannesburg, quotes the following extract—published about November, 1908—from *God's Latter Rain*, which appears to be the official organ of a local religious sect: "Letis Saunders, of 32, "De Korte Street, Braamfontein, Johannesburg, testi-"fies: 'My eyes were so bad, my sight was almost "'gone, and my eyes were sunken and withered. I "'was treated by several doctors—Dr. Brinton, an "'eye specialist, Dr. ———, and Dr. ——— (we do "'not think it necessary to give the names), and "'others. The doctors said my sight had always "'been defective and could not be healed. I went "'to the tabernacle and Jesus healed me as the "'brothers prayed. Now my eyes are perfectly well "'and all the pains are gone.'" We do not mean for a moment to call in question either the efficacy of the brethren's prayers or the good faith of the patient. But the brethren themselves would doubtless wish that the truth should be made manifest, and it is fortunate that they have had their wish. Dr. Brinton gives an extract from his case book from which it appears that the patient was sent to him five and a half years before the date of the statement above quoted. She was then 9 years old. A comparison of his notes taken at the time with the girl's testimony shows that the statement attributed to him is inaccurate in every particular. Her vision was perfect; her right eye was normal, while there was nothing wrong with the left eye but some slight scarring, probably left by phlyctenular conjunctivitis from which she had suffered before she came under his care. This scarring, as Dr. Brinton says, would in all probability have yielded naturally in the course of the five years to the use of the yellow oxide of mercury ordered by him. We repeat we do not mean to insinuate that the poor child was consciously lying when she testified to the remarkable cure of non-existent disease. Her statement, like that of all the testimonies as to Christian Science and other forms of spiritual healing that can be brought to the test, is obviously the result of auto-suggestion stimulated in an ignorant mind by an atmosphere of unwholesome religious excitement.

MEDICINE AS A SOURCE OF INCOME.

AT page 1431 of this issue will be found an article dealing with a subject of great interest to all medical men, and to all those who are ever called upon to give advice as to the choice of a career. The profession of medicine does not, of course, depend for its attractions solely on the amount which those who adopt it as a career may expect to obtain in the way of income. Nevertheless, in the vast majority, if not in all cases, this must be regarded as a very important consideration. How far it is common for medical men to enter on the actual practice of medicine without any capital whatever may be a moot question; but since a medical education is very expensive and the acquirement of a practice either by purchase, or by setting up house and waiting until patients come, may well absorb quite an average fortune, it is to be feared that no large proportion of medical men has means other than those drawn from their labours year by year. In such case the difference of a few pounds in the year's income one way or the other may make all the difference between comfort and discomfort, and it is indubitable that of late years complaints as to undue difficulty in making an adequate income have been increasingly frequent. It is possible that such complaints are sometimes exaggerated, but unfortunately one meets commonly with distressing evidence that many of them are only too true. In any case it is assumed in the article that it really is more difficult to gain a satisfactory livelihood from practice than it used to be, and an attempt is made to discover whether, when things as they now exist are contrasted with what they were twenty-eight years ago, any difference is discernible which would naturally tend to make the practice of medicine a less paying calling than formerly. It is admitted that a complete answer to the question involved must depend upon consideration of a great number of different factors, and in this article, which is based on painstaking and laborious investigation, no attempt is made to deal with more than one of them. Its net outcome is to show that one striking difference in the conditions of practice between the beginning and the end of the period investigated certainly exists, and that it is of such a character as to be likely to add to the difficulties which a man of average ability and average opportunities may expect to encounter in gaining a living by practice. The whole case, however, cannot be considered to be proved until other investigations along the same line have been completed and analogous conclusions are shown to result from them. The results of one of them will be published at an early date.

THE REVOLT OF THE HERBALISTS.

THE inquest in a case which had been attended by a herbalist, to which reference was made in the medico-legal notes in last week's JOURNAL, has been followed by a local demonstration by the so-called People's League of Medical Freedom. Under the auspices of this league a public meeting was held at Sowerby, a village on the fringe of the Yorkshire moors, to protest against the action of the Halifax District Coroner (Mr. E. H. Hill) in connexion with the *post-mortem* examination and inquest. Quaint customs die hard in remote places. There are districts where the village herbalist still has a following, and any attempt to restrict his or her pretentious practices are strongly resented by the villagers. Lovers of freedom and liberty in medicine were invited to the meeting "to resist the tyranny of medical priestcraft." The proceedings were enlivened by the presence and speeches of Mr. W. H. Webb, a Southport herbalist, and proprietor of the *Herb Doctor*, and Mr. J. P. Swan, Honorary Secretary of the People's League, of which the *Herb Doctor* is the official organ. With a touch of unintentional but ironical significance, a press report says: "Darkness closed in on the meeting, the resolu- "tion was put without delay, and was carried without "dissent amid loud applause." The resolution expressed indignation at the action of the coroner. Two grievances were resented. It was alleged that he inquest should not have been held, and that the herbalist should have been called to give medical evidence. Regarding the first point, the discretion is properly in the hands of the coroner, to whom the facts and circumstances are communicated. The second point raises an altogether insupportable claim. It is preposterous to suggest that a coroner should accept medical evidence as to the cause of death from persons who have had no medical training. Mr. Swan is reported to have said: "Medicine is an Art, and therefore a great doctor was "born, not made. The success was to the man with "superior instinct." This is an age of prodigies, but we are not aware of the existence of any individual born with a knowledge of anatomy, physiology, or pathology. Artfulness (not Art) and superior instinct may be useful in impressing other people that one possesses knowledge and ability where neither exists, but these are precisely the elements which make the empiric and the quack. It would be interesting to know the constitution and membership of this league with the high-sounding title. The agitation for medical freedom of the kind desired by this league is promoted by means of much misrepresentation as to the meaning and intention of the Medical Acts now on the Statute Book. These are framed in the public interests, and not for the benefit of registered medical practitioners, as often alleged. Other comments on the eccentricities of the People's League of Medical Freedom appeared in the JOURNAL on May 23rd, last year.

TYPHOID CARRIERS.

A MEMORANDUM, addressed to hospital physicians and others who may be called upon to deal with typhoid fever cases, has been issued by Dr. D. S. Davies, M.O.H. Bristol, suggesting that, in view of knowledge recently acquired as to the risk of continuously-infected persons known as "carriers" maintaining and distributing typhoid fever infection, physicians —especially those attached to public institutions— might do well to arrange to keep a register of convalescents and their addresses, with a view of securing their periodic attendance for a period of six months, in order to determine bacteriologically their actual condition as to infectivity. The ultimate aim of any method adopted to check this source of infection must be the discovery of a method of cure, but it is suggested that in the meantime the circulation of simple rules among convalescent patients might lead to some diminution of typhoid, and with this object Dr. Davies appends a paper of instructions to typhoid convalescents. Dr. Davies makes reference to the report by Lieutenant-Colonel Semple and Captain E. D. W. Greig published in the *Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India*, the conclusions of which were stated in the BRITISH MEDICAL JOURNAL last September (vol. ii, 1908, p. 834). The inquiry confirmed the conclusion drawn from the cases reported at various times during the last few years in our columns, which is that persons convalescent from typhoid fever, and even in some cases persons who have had the disease years before, may harbour the bacillus, and become centres of small epidemics. This is more particularly true of individuals engaged in the preparation of food. There can be no doubt that the solution of the problem of how to treat these persons so as effectively to free them from the bacillus would be a most important step in advance, and would eliminate one most insidious cause of the continuance of the disease, and of the occurrence of so-called sporadic cases. The fact that the medical officer of health of an important English city has felt it advisable to invite the profession in that city to co-operate with him to this end, may perhaps be some consolation to Captain Clive and Mr. Ward, who, as will be seen by a paragraph in our Parliamentary Notes this week, are much exercised because certain soldiers who harbour the bacillus are being detained under treatment in the Millbank Military Hospital.

MILK AND DAIRIES BILL FOR SCOTLAND.

THE Milk and Dairies Bill introduced by Mr. Burns on May 25th, and analysed in the SUPPLEMENT for last week, is to apply, with certain necessary verbal alterations, to Ireland, but is not to extend to Scotland. The reason for this is that on the previous day the Secretary for Scotland introduced a Milk and Dairies Bill for Scotland into the House of Lords. The text of this bill was not available until after Parliament had adjourned for the Whitsuntide recess, and we were therefore unable to publish an analysis of its provisions last week; but such analysis will be found in the SUPPLEMENT for this week. The Scottish bill is generally on the same lines as the bill for England and Ireland, but appears to us to be in certain respects better. The appointment of a veterinary officer in England will depend upon a special order being made by the Local Government Board, whereas in Scotland, if we read Section 3 correctly, it will be incumbent upon the authority in every district to appoint such an officer. In Scotland the medical officer of health will be required to inspect every dairy annually, whereas the provision of the English bill on this head is permissive. The Scottish bill provides that a vehicle from which milk is sold shall be deemed to be premises, but we fail to find any such provision, which may prove extremely useful, in the English bill; nor do we see in the English bill a provision requiring the dairyman to produce a list of his customers and invoices in any case in which the outbreak or spread of infectious disease appears to be attributable to the milk. There are other points on which the two bills differ, but these appear to be the more important.

UNQUALIFIED PRACTICE.

The inefficient nature of the Medical Acts for the prevention of unqualified medical and surgical practice is illustrated daily in the advertisement columns of the newspaper press, both in London and in the country. By means of specious advertisements, the ignorant public is deluded into entrusting the health of themselves and their children to those who, neither by course of study or professional knowledge, are fit and proper persons to undertake the important duties involved. Our attention has lately been called to a column advertisement in the *Leicester Daily Mercury*, headed "Blindness," which emanates from a limited liability company, styled Ison's Eye and Ear Dispensary, Great George Street, Leeds. Starting with extracts from the *Daily Mail*, in which the cause of blindness in many cases is imputed to neglect in infancy, and continuing with an extract from the *Lancet*, in which some years since the importance of special study for medical practitioners in eye diseases was made the subject of comment, it proceeds to eulogize the "life study" of one Thomas Ison, "Oculist and Aurist," and to inform the public that he is in a direct line of descent of those who have made a study of such diseases for upwards of sixty years. It is added that "none should attempt to cure its defects but those "who have made a thorough study of the diseases "to which it—the ear—is peculiarly liable." This information is somewhat discounted by the fact that Mr. Ison is not a qualified practitioner in any respect, and it is as well that the public should realize that the titles, "Oculist and Aurist" are self-assumed, and, therefore, of no value as a mark of any special knowledge of the subject about which he writes and advertises himself. It will be remembered in this respect that Mr. Ison was prosecuted by the Medical Defence Union in 1906 before the stipendiary, and convicted under Section 40 of the Medical Act, 1858, for assuming titles implying that he was recognized as a surgeon, and subsequently converted himself into a limited liability company, and thus presumably ended any further liability under the Act. It will also be remembered that a bill to prevent the practice of medicine and surgery by limited liability companies was passed by the House of Lords and sent down to the lower house about two years ago, but since that date no further progress has been made in this direction. The advertisement of Ison's Eye and Ear Dispensary, Limited, is an object lesson, and affords a concrete instance of the need for amended legislation. To comment by advertisement upon the dangers of neglect in infancy in order to tempt unwary parents to continue such neglect by placing their ailing children under the treatment of an unqualified practitioner would be amusing if it were not dangerous. It must be remembered that under the "Children Act" failure to provide adequate food, clothing, and *medical aid* is now deemed to be neglect in a manner likely to cause injury to health. It cannot be too forcibly brought home to parents that to entrust the care of their children to quacks is a statutory offence which makes them liable on conviction to a penalty.

CONGRESS OF OPHTHALMIC SURGEONS.

The meeting of ophthalmic surgeons that for some years past has taken place at the conclusion of the post-graduate course in ophthalmology at Oxford will be held this year on July 15th and 16th. The following programme has already been arranged Demonstration of a case of leprosy under treatment, by Mr. Treacher Collins. (1) Address on sérothérapie paraspécifique, (2) demonstration of intravenous injections, by Dr. Darier (Paris). (1) Operation for detached retina, (2) address on treatment by yeast serum in eye diseases, by Professor Deutschmann (Hamburg). Address on difficult iridectomies, by Professor Dufour (Lausanne). Demonstration of several new phenomena connected with colour vision, by Dr. Edridge-Green. (1) Address on the etiology of trachoma, (2) demonstration of the microbes of trachoma, by Professor Greeff (Berlin). (1) Address on muscle defects, latent and actual, (2) a new test for vision—the diaphragm test, by Mr. Bishop Harman. A series of microscopic specimens of the iris after iridectomy, showing the absence of cicatrization, by Dr. T. Henderson. Demonstration of his operation for glaucoma on pig's eyes, by Colonel H. Herbert. Address on some lacrymal gland cases, by Dr. Hill Griffith. Demonstration of the methods and appliances employed in the estimation of the working capacity of injured workmen, Mr. Jameson Evans. (1) Operation for ptosis and for glaucoma, (2) demonstration of test for binocular vision, by Dr. Freeland Fergus. Head specimen for demonstrating operations, by Dr. Knapp. Demonstration of the Mendelian theory and its application to ophthalmology, by Mr. Ormond. The use of radium in eye disease, by Mr. Arnold Lawson and Dr. Mackenzie Davidson. Some *x*-ray pictures will be shown by Dr. Mackenzie Davidson. Microscopical demonstration of the bacteriology of corneal ulceration, by Mr. A. McNab. Operation for ptosis, by Dr. Motais (Angiers). Demonstration of his diploscope, by Dr. Rémy (Dijon). Address on the significance of optic neuritis, by Dr. Risien Russell. Operations for (1) muscle advancement, (2) marginoplasty for entropion, by Dr. Story. Stereoscopic demonstration of the structure of the eye, by Professor Thomson. A scotomagraph with stereoscopic fixation will be shown by Mr. Tomlinson. In addition there will be several interesting cases shown at the Eye Hospital. Surgeons who desire to attend can be accommodated to the number of seventy at Keble College at the rate of 7s. 6d. per day. A dinner will be held in Keble Hall on Wednesday, July 14th. At the conclusion of the meeting a launch will leave Folly Bridge on Saturday, July 17th, to go down the river to Reading. Further particulars can be obtained on application to Mr. R. W. Doyne, 30, Cavendish Square, London, W.

THE LATE MR. SIMEON SNELL.

Dr. Richard A. Reeve, of Toronto, President of the British Medical Association in 1906, writes: By a regrettable mischance the issue of the Journal of April 24th was mislaid and overlooked, so that I was unaware of the passing away of our lamented President for several weeks after the sad event. I was quite shocked to hear of Dr. Snell's death, and I would like to add my tribute of appreciation of his good work and solid worth. I had known him for a number of years and had formed a high estimate of his character, wide experience, and professional acquirements—an opinion which, I believe, was shared by not a few of his *confrères* on this side of the Atlantic. His geniality and wholeheartedness were much in evidence; as an instance, I recall with pleasure not only his successful conduct of the Section, but his generous hospitality to the members, at the Portsmouth meeting. One could not fail to recognize the energy, ability, and thoroughness which Dr. Snell displayed in all his work—qualities, indeed, which marked him as a worthy member of the British School of Ophthalmologists. One cannot but feel that the demise of such a man will be a distinct loss even to so great a body as the British Medical Association.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Typhoid Carriers.—Some little time back Captain Clive asked a question about the detention in hospital of soldiers who had contracted enteric fever in India, and on their return to this country had been found to be enteric germ-carriers. Mr. Haldane said that the question evidently referred to the seven non-commissioned officers and men under treatment at Millbank Military Hospital. He was informed that the condition of these cases rendered them dangerous to their comrades in barracks. It was, therefore, decided, on the recommendation of the Army Medical Advisory Board, to place them under special treatment to see if their condition was curable. This treatment had met with encouraging results, and one at least of the cases, it was hoped, had been cured. Although patients in hospital, they were allowed considerable freedom, and were not treated as ordinary patients, but rather as convalescents. They would be free so soon as the danger of the bacilli which they had brought to this country had been removed. Mr. Clive asked if the theory of germ-carrying was not quite unproved. Mr. Haldane replied that he did not think so. The advance of medical science on this subject within the last two years had been enormous. Mr. Ward asked if the experiments were being made with the sanction of the men and whether they would be pensioned in case of permanent injury. Mr. Haldane said he did not know why the treatment was referred to as an experiment; it was a well-known ascertained cure. Last week Mr. Ward recurred to the matter and asked whether these men had given their sanction to the experiments being made, and whether, if the treatment impaired their health they would be granted pensions. Mr. Haldane, in a written answer, replied that the proposed treatment was fully explained to the patients who, far from offering any objection, were greatly interested in what was being done. Apart from their liability to infect others, they were in exceedingly good health and the possibility of permanent injury to their health from the treatment need not be contemplated. Papers on the subject would very shortly be laid on the table.

Indian Medical Service.—Mr. Mooney asked the Under Secretary of State for India whether it was the policy of the Government of India to make use of the civil branch of the Indian Medical Service as a reserve of officers for the Indian Army; whether it was proposed in case of war to withdraw officers of the Indian Medical Service from the posts which they hold at present in all the important civil medical institutions; and, if so, whether any provision was or would be made to fill their places? Mr. Hobhouse answered that the civil side of the Indian Medical Service was intended to be used to a considerable extent as a war reserve; but the officers holding the more important and specialized posts in civil medical institutions were not regarded as a part of the war reserve.

Dispensary Doctors (Ireland).—Mr. Ginnell asked the Chief Secretary for Ireland how long the Local Government Board for Ireland allowed a dispensary medical officer to continue incapable from excessive indulgence in intoxicating drink before taking action; and what precautions, if any, the Board took for the lives of the poor, who had no choice of medical practitioner, after the Board had learned that the officer was addicted to this vice? Mr. Cherry replied that the hon. member was in error in assuming that action was not taken at once when a complaint was made officially to the Local Government Board that a medical officer of a dispensary district had become incapable of discharging his duties owing to excessive indulgence in intoxicating drink. The medical officer, however, could only be deprived of his post on sufficient grounds, which should be established at a public inquiry where he could be afforded a full opportunity of offering a defence. Allegations of intemperance contained in anonymous letters or made by individuals who refused to permit their names to be disclosed, would not be a proper basis for an official investigation against a medical officer. The boards of guardians were charged with the supervision of the medical officers, and were assisted in that duty by the Local Government Board's medical inspectors. In addition, the poor might at all times complain against medical officers either to the guardians or the Local Government Board, and in that way secure redress and efficient medical attendance.

The Colonies and Malaria.—Mr. Ramsay Macdonald asked the Under Secretary for the Colonies whether the eleven Colonies which made no special report on malaria, in response to the circular of June 6th, 1906, had since been communicated with, and had been asked to furnish reports. Colonel Seely said that a special circular had recently been sent out by the Secretary of State with a view to obtaining fuller information with regard to anti-malarial measures, both from the Colonies referred to and from other tropical colonies. Mr. Ramsay Macdonald then inquired as to St. Kitts-Nevis, where nothing had been done to destroy the breeding places of malaria-carrying mosquitos. Colonel Seely replied that the Secretary of State had made no further representation to the Government of St. Kitts-Nevis in this matter. He feared that effective action in this direction might be hampered by financial considerations, but the officer administering the Government would be asked for a report on the possibility of taking action. Mr. Ramsay Macdonald then referred to the opinion expressed by the Administrative and Executive Council of the Colony that rules for the suppression of mosquito-borne diseases, including malaria and yellow fever, were *ultra vires*. Colonel Seely answered that the incident referred to took place in 1906, and there had been no recent correspondence on the subject. The Secretary of State would now call upon the Governor to furnish a report as to the measures taken in the Bahamas to combat tropical diseases. It had to be remembered that legislation and expenditure in this colony were dependent upon the consent of the House of Assembly, which was an elective body.

The Madras Medical College.—Mr. Mooney asked the Under Secretary of State for India whether the present President of the Medical College, Madras, was appointed to that post after having acted as Surgeon on the personal staff of three successive governors of Madras; and what educational experience this gentleman possessed to qualify him for his present appointment? Mr. Hobhouse replied that the present principal of the Medical College, Madras, was Surgeon to the Governor of Madras from May, 1892, to February, 1902. He had also held various other appointments in the medical service, and was Professor of Medical Jurisprudence and Professor of Surgery for two and a half years before he became principal. The appointment was one for which the authorities in India were responsible, and the Secretary of State saw no reason to question the propriety of their selection.

The Public Health Acts.—Mr. Gladstone stated before the Whitsuntide recess that on the application of the local authorities orders had been made declaring Section 85 of the Public Health Acts (Amendment) Act to be in force in thirty-three boroughs and thirty-two urban districts. The Act did not empower a county council to apply for an order.

The Medical Acts Amendment Bill was withdrawn on Monday night last. It is understood that the bill will be introduced again shortly in an amended form, so as to place the question of the administration of anaesthetics in a shape less likely to excite opposition.

A SPECIAL meeting of the Council of the Charity Organization Society will be held on Monday, June 28th, at 4.30 p.m., at Denison House, Vauxhall Bridge Road, S.W., when Miss Amy Hughes, of the Queen Victoria Jubilee Nurses' Institute, will read a paper on provident nursing. Sir Alfred Lyall, G.C.I.E., K.C.B., will take the chair, and the Right Rev. the Bishop of Islington will speak.

England and Wales.

[From our Special Correspondents.]

MANCHESTER AND DISTRICT.

The Langho Inebriates' Homes.

Special interest attaches to the annual report of the Langho Inebriates' Homes, in view of the fact that some time ago the Manchester Justices expressed a very unfavourable opinion as to the value of such institutions. At the beginning of last year there were 128 persons under detention, and 51 fresh cases were received; 14 were released on licences, 2 of which were revoked; 28 were discharged on the expiry of their sentences, 1 was sent to an asylum, and 1 readmitted, leaving 137 at the end of the year. Suitable occupation was given to the inmates, such as wood chopping, dairy work, and haymaking, while 35 women were engaged in laundry work, and others at sewing or rug making. Some of the well-conducted women, towards the end of their detention, were allowed to go out as charwomen in the neighbourhood, and the experiment was thought successful, as only 2 gave way to drink, and, besides being a source of revenue to the institution, it served as a sort of preliminary trial of their self-control previous to their dismissal. The Director complains that these and similar homes have gradually become places of detention for feeble-minded criminal drunkards, which will account for the fact that many of the patients after dismissal relapse into their old habits. The list of previous convictions recorded against the women sent to the homes averaged 28, though there seems to be some doubt in many cases. Exaggerated statements have from time to time appeared in the press as to the cost of treatment; in one case it was stated that a woman had cost the ratepayers £230, but on investigation it appeared that the actual cost of her detention for three years was a much smaller sum. Another press report said that it cost a certain authority 30s. a week for each inmate, whereas the actual cost for each woman during the last year was 14s. 3½d. a week, towards which the local authority paid 7s. 7d., the remainder being provided by the State contribution and the receipts from work done by the women themselves. During the year the women had earned altogether £981 actual cash profit, exclusive of work done for the institution. Referring to the question of the value of such homes, the Director urges that critics have not made allowance for the fact that by far the greater proportion of the cases are feeble-minded, and also that one special purpose of the Act was control by detention, which seems often to be forgotten. The majority of the women leave the institution with good intentions, but on returning to their own homes they are faced by want of employment and exposed to the temptations of old companions, and the unfortunate facility with which they can obtain a living by immoral practices often leads them to drink as a sequence.

WALES.

A Case of Leprosy at Cardiff.

At the Seamen's Hospital, Cardiff, on June 1st, the Medical Superintendent discovered one of the out-patients, a Chinaman lodging in one of the Bute Street boarding houses, to be suffering from leprosy in a very early stage. Dr. Whelan immediately communicated with the port sanitary and municipal authorities, and since that time the patient has been the subject of a series of microscopical examinations. The result of these examinations seems to have confirmed the view as to the nature of the disease formed by Dr. Whelan, and the leper was admitted to the Seamen's Hospital and immediately isolated. Every other possible precaution has been taken by disinfection and other preventive methods, and a close examination has also been made as to the condition of all the other lodgers at the house where the patient stayed. Dr. Whelan is of opinion that the disease was originally contracted in China prior to the departure of the patient from Hong Kong in March, 1907. Dr. Fairfield Thomas, assistant medical officer of health, has reported to the Cardiff Health Committtee that he had done everything possible with regard to the leper, the patient having been isolated, and disinfection had been carried out very thoroughly. The question for the committee was the extent of its responsibility. It was of course responsible for the man's maintenance in the Seamen's Hospital. Legally he was destitute, and undoubtedly the guardians were responsible, but he did not know that the committee would care about shifting the responsibility in such a case.

Sanitation of Glamorganshire.

At the quarterly meeting of the Sanitary Committee of the Glamorgan County Council, held at Cardiff on June 4th, the County Medical Officer reported with regard to infectious diseases, that there had been an increase in the number of cases notified of small-pox, membranous croup, and puerperal fever, and a decrease with regard to diphtheria, erysipelas, scarlet fever, and enteric fever. It has been decided to provide a hospital with some 50 beds at Aberdare. The Caerphilly Hospital was opened for the reception of patients on April 27th. Several sites for a hospital for Neath Rural District have been inspected, and the District Council has given the Hospital Committee full power to deal with the matter. The alterations and additions in connexion with the administrative block of the Rhondda Hospital have been completed.

Ebbw Vale Dispute.

The following paragraph appears in the *Western Mail* (Cardiff) of June 7th:

> The two subcommittees appointed to arrange the terms of arbitration in the doctors' fund dispute at Ebbw Vale have met and discussed the question of arbitrators. The workmen's doctors' fund committee has selected Mr. Phil. Snowden, M.P., as their arbitrator, and the Cwm section has chosen Mr. Tom Richards, M.P. The doctors' committee so far has not accepted Mr. Richards. They do not object on personal grounds, but on the contention that it would be more satisfactory to have a perfectly independent person, and one who is totally unacquainted with the dispute. They hold the same objection to Mr. Brace, M.P., and would prefer the Cwm section to submit the name of a person outside the county of Monmouth. It is understood that the Board of Trade will be requested to nominate the referee.

Scotland.

[From our Special Correspondents.]

Extension of the Glasgow Western Infirmary.

The building of the extension to complete the west block has now been commenced, and will be rapidly pushed on, as the builders are under contract to have the roof on by November. This addition will provide accommodation for 94 beds.

Victoria Infirmary, Glasgow.

The post of visiting physician, vacant by the retirement, owing to the age limit, of Dr. Duncan, has been filled by the appointment of Dr. Love, who was so long associated with the late Dr. Finlayson at the Western Infirmary.

Meeting of the Physiological Society.

The experiment of holding a meeting of the Physiological Society in Glasgow was fairly successful. Comparatively few of the English members came north, but there was a good attendance of local members, and the contributions and demonstrations gave some indication of the scope and quality of the research work carried on in Scotland. The size and equipment of the physiological buildings was much commented on.

Medical Inspection of School Children.

The Secondary Education Committee of the County of Lanark has prepared a draft scheme which provides for the co-operation of all the school boards. It is proposed to divide the county into districts, each under the charge of a medical inspector, who would be responsible for the work in that district. From five to seven medical inspectors would be required, and in order to supervise and co-ordinate the work of these inspectors the draft scheme provides for the appointment of a supervising medical officer, who would also collate and be responsible for the compilation of the statistics. As Dr. Wilson, the county medical officer, is willing to undertake this supervising and

statistical work, a considerable saving could be effected, as it would not be necessary to provide separate offices. This draft scheme was submitted to a large and representative conference of the school boards of the county, and, after a full discussion, it was decided that the representatives should confer with their boards and at a subsequent meeting decide whether they were prepared to adopt the draft scheme.

LUNACY IN SCOTLAND.

The general Board of Commissioners in Lunacy for Scotland have just issued their annual report. In it they state that on January 1st, 1909, exclusive of insane persons maintained at home by their natural guardians, there were in Scotland 18,197 insane persons of whom the Commissioners had official cognizance, including the inmates of the training schools for imbecile children and of the criminal lunatic department of Perth Prison. Of these, 2,682 were maintained from private sources, 15,464 by parochial rates, and 51 at the expense of the State. There is an increase in the number of insane during the past year of 289. The maintenance of this large number of insane amounted to £398,682.

Referring to the cost of district asylums, which is a heavy item of expenditure falling to be paid by the ratepayers, the Commissioners remark that the constant demand for additional accommodation for the insane, the large scale on which it has been found necessary in many cases to provide it, and the magnitude of the expenditure involved, have recently become the subject of much discussion. The Commissioners further state that for some time past they have urged upon district lunacy boards that all asylum buildings should be of the utmost simplicity compatible with efficiency for their general purpose, and that no expenditure should be incurred on external ornaments or in any other similar directions which are contrary to a strict economy and in no way contribute to the amelioration of the condition of the insane. It is hoped these pertinent remarks of the Commissioners will have some effect in diminishing the cost of asylums.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

IRISH MEDICAL BENEVOLENT FUND SOCIETY.

THE annual general meeting of this society was held in the Royal College of Physicians on June 7th, when Dr. Andrew Horne, P.R.C.P., occupied the chair.

Annual Report.

The report of the Committee stated:

The total amount of the grants recommended since the last distribution is £1,327. The total number of applications considered during the year was 90. Of these 81 were from the widows of medical men, 5 from, or on behalf of, their orphans, and 4 from medical men themselves. The number of applicants this year has been very large, and the amount given in grants has strained the resources of the Society, yet to many of the recipients the aid given has fallen very far short of their claims, and of their urgent necessities. The amount received through the central treasurer was £226 3s. 6d., as compared with £195 the year before. The subscriptions received from branch treasurers amounted to £315 16s. 2d., as compared with £351 11s. 3d. the year before. The Belfast and Co. Antrim Branch contributed £151 5s., including £5 5s. received late for audit the previous year. Since the accounts were closed a further sum of £9 13s. 6d. had been received from that branch. Of the £315 16s. 2d. received from county branches, £138 18s. 2d. should have appeared in last year's account, but was not received until that account had been closed. The branch treasurers doubtless do what they can to send their collections in time for audit. At present it is impossible to present the accounts in such a form as to make it easy to compare one financial year with another.

Mr. John Lentaigne moved and Dr. MacDowel Cosgrave seconded the adoption of the report. The former stated that there were about 3,000 members of the profession in Ireland, but only 500 contributors to this fund. Roughly, the amount of the subscriptions came to £541, while the amount paid out in awards was £1,327. There was a most serious falling off in the contributions from the branches. He thought one reason was that some medical men did not know of the existence of the society and of the work that it was doing. This year they would try another plan, and he hoped that it would result in a considerable improvement in their funds.

Dr. Hastings Tweedy, Sir Lambert Ormsby, Dr. J. Magee Finny, Dr. Garland, Dr. Knox Durham, and the Chairman also addressed the meeting, and pleaded for liberal support of the society.

NEW CHILDREN'S HOSPITAL IN UNION INFIRMARY, BELFAST.

On June 3rd a large company assembled to join in the opening of the New Children's Hospital of the Belfast Poor Law Guardians. Dr. Bryars, Chairman of the guardians, heartily welcomed Lady Hermione Blackwood, who was to perform the ceremony, and other guests, and gave a short history of the movement. Lady Hermione Blackwood said the Belfast guardians had forestalled the findings of the Poor Law Commission, had segregated phthisical patients, built an admirable sanatorium, and now provided a separate block of buildings for a children's hospital, which enabled the classification in separate wards of medical, surgical, and special diseases. The true economy was to place a sick child under conditions of sunshine, cleanliness, and fresh air. The new block was then opened, and named the "Dufferin Children's Hospital," after the late Lord Dufferin. Sir John Byers, at the request of the Chairman, moved a hearty vote of thanks to Lady Hermione Blackwood, and said that the guardians could have got no more suitable person, as she was not only a daughter of a most illustrious Ulster house, but also a fully trained nurse and an inspector of Jubilee nurses in Ireland, who thus as an expert could keenly appreciate the enormous advantages of such an institution. A choir of the children sang "The Irish Emigrant," a song composed by Helen, Lady Dufferin, Lady Blackwood's grandmother.

The new hospital has eight wards, and accommodates 200 children. It is situated apart from the other workhouse buildings, with large balconies facing south-west, and commanding a view of the valley for miles. It is built of red brick, and is three stories high. The main entrance is by a front central door with fireproof stairway rising to the top story. The separation of the children is well carried out in all details. The medical attendant will be Dr. Fulton, and Mr. Craig will have charge of the Eye, Ear, and Throat Department. Dr. Mary E. M. Logan will act as resident surgeon.

PROFESSOR FRASER.

A committee has been formed in Dublin to present Professor Fraser with some token of respect and admiration on the completion of his twenty-five years as Professor of Anatomy in the school of the Royal College of Surgeons in Ireland. It is felt that Professor Fraser's distinguished position as an anatomist, his lucidity as a teacher, and the unselfishness which has characterized his intercourse with students, deserve recognition from his former pupils, and subscriptions, not to exceed one guinea, may be forwarded to the honorary treasurer, Sir Arthur Chance, 90, Merrion Square, Dublin. The chairman of the committee is Mr. John Lentaigne, President of the College of Surgeons; and the honorary secretary is Mr. William Taylor.

HEALTH OF BELFAST.

At the meeting of the City Council on June 1st the medical officer of health reported that the death-rate from all causes for the past month had been 20 per 1,000, and from zymotic diseases 0.8 per 1,000. The number of infectious cases notified had been abnormally low.

The Harbour Commissioners and the City Council have come to an agreement which settles the dispute between the two bodies that threatened at one time to involve serious litigation. The Council will pay to the Commissioners £6,000 in full settlement of all claims for dredging of sewage of the town from the various channels.

The Local Government Board has refused to sanction the application by the City Council for a loan of £112,300 for the purpose of providing purification sewerage works, on the ground that the precise amount of purification is not evident; the resolutions dealing with the question were referred back to the committee.

Correspondence.

SPEECH FRIGHT.

SIR,—I liked your leader on "speech fright" very much, for it is a subject deeply interesting to all of us who have had from time to time to face the necessity of the responsibility for public speaking. But it disappointed me, too, for I had hoped for a scientific explanation of the curious but undoubted fact that a man who has been talking fluently and even eloquently as long as he retains his seat, begins to halt and stammer and even to break down hopelessly whenever he assumes the erect posture.

Cannot the physiologists help us? The ingenious Lauder Brunton has lately discovered, or popularized the discovery of some one else, that fatigue is due to a toxin developed in some mysterious way within the human body, and perhaps a microbe or some of those microscopic intruders may have something to do with the nervousness which afflicts most of us at inconvenient times; and I suggest this as a plausible line of investigation, to be carried out under the pecuniary auspices of the British Medical Association or the Royal Society. Meanwhile we must grin and bear the thorn in our intellectual flesh which Providence for some inscrutable reason of His own has planted there; and it is consoling to note that this form of temporary mental incapacity, sometimes running up to an absolute evaporation of words and ideas, is shared by some of our greatest orators. Lord Coleridge told George Russell that he once asked Gladstone if he ever felt nervous. "In opening often, in reply never," was the reply. And Lloyd George, so notorious for his glib tongue and nimble wit, made this confession to a friend: "When I was making my maiden speech I tell you I was in a state of misery. It is no figure of speech, but literally true, that my tongue clove to the roof of my mouth, and at first I could hardly get a word out." And Lord Althorp, the famous Prime Minister, said to Macaulay that he had only just got over his apprehensions. "I was as much afraid," he said, "last year as when I first came into Parliament. But now I am forced to speak so often that I am quite hardened. Last Thursday I was up forty times." Dizzy's famous breakdown is a matter of history, and Toby, in his inimitable style, has described the painful scenes he witnessed when Bob Lowe and the late Lord Derby came within more than measurable distance of total collapse. Probably some of your readers may have been present at the dinner given to my old friend, Sir John Tenniel, when the hero of the occasion, after helplessly looking round the room and stammering out a few words, abruptly sat down. This was when Birrell used the very happy phrase that this was one of the occasions when silence was more eloquent than words. But the great cartoonist told me afterwards that he had prepared an excellent speech, but when he stood up, absolute vocal paralysis seized him, and, unluckily, he had no text to fall back upon. In my own experience, I remember two occasions when I rose up to speak at public dinners, when my mind suddenly became a blank, and I was only saved from absolute disaster by some notes which I prudently had before me. I presume that temperament has something to do with this, for I have seen an Irish member, within a couple of hours of his introduction to the House, get up and hold forth with perfect fluency and confidence, and women are much less self-conscious on public occasions than men, and, take them all over, they speak much better than we do.

You have referred to various drugs taken by speakers to stimulate their oratorical powers and overcome nervousness. Wilberforce usually took an opium pill. Lord Granville in his *Life*, regrets having stood between Lord Beaconsfield and the House of Lords, because he heard afterwards that the great ex-Premier had swallowed something and inhaled something which timed him to speak at a particular moment; and it is broadly hinted that a very distinguished politician is in the habit of using whiffs of oxygen to recruit his flagging energies.

Stammering is, I suppose, a form of nervousness, and as a rule it cannot be overcome by any effort of will. But how curious it is that a man who stutters painfully in ordinary speech should be able to sing or read or make a considered speech without hesitation. David Plunkett, whose conversational efforts were marred by painful hesitancy, was one of the few real orators to whom it has been my privilege to listen in the House of Commons. It seems evident to my mind, also, that animals are occasionally nervous. We know that a gun-shy pointer is only really food for powder, and another who blinks his points had better follow it into the grave as quickly as possible. The inexplicable in-and-out running of racehorses can only be explained in this way, and the irritating peculiarity of parrots in always declining to talk to order must certainly be due to a disinclination on the part of the bird to display its accomplishments "before folk."

But I could ramble away for ever over this fascinating theme, and I must now make room for others who, I hope, will keep the ball a-rolling, and contribute their experiences and recollections for our interest and instruction.—I am, etc.,

Reform Club, June 8th. R. FARQUHARSON.

SIR,—Your request to readers of the JOURNAL to give their experience in treating "speech fright" or the analogous condition of "stage fright" is one that I hope will receive the attention it deserves. Nothing that we can do earns us more gratitude than the relief of this most distressing condition, especially as on the concert or dramatic stage it is often the real artist that suffers most. For various reasons I have had many opportunities of treating these unfortunate people, and have been able to satisfy myself as to the right lines on which they should be treated. Bromides are worse than useless, and also other drugs with one exception. In many cases a placebo is all that is necessary; but there is no doubt that in others a dose of from 6 to 10 minims of vinum opii, given a quarter of an hour before the first appearance on the stage, is a remedy of very great value, and I have never found it leave any disagreeable after-effect, though, as you remark, Sir, it should obviously only be used under medical advice.—I am, etc.,

Birmingham, June 7th. E. D. KIRBY.

SIR,—When I was a student at St. Bartholomew's (1870 to 1875) I remember well our revered teacher, Luther Holden, always recommended students who were nervous to take a $\frac{1}{4}$ grain of opium (or, at most, $\frac{1}{2}$ grain) just before going into college examination. A *small* dose of opium, as most people know, sharpens the wits and yet quiets the tumultuous heart; and also diminishes the secretion of urine, which is apt to be so excessive in the nervous state. Large doses of opium are, of course, foolish and harmful. On many occasions I have prescribed for nervous speakers 1 grain of opium in four pills, and one of the pills has been all that was required, a cup of good coffee after the mental effort recuperating the tired talker or performer and preventing any headache. Alcohol, as you wisely say, is the worst possible drug to try on these occasions.—I am, etc.,

J. KINGSTON BARTON, M.R.C.P.Lond.

London, S.W., June 6th.

SIR,—I have had success in the treatment of this complaint by suggestion, both with and without hypnosis. I gave a list of my cases up to the end of June, 1907, in the paper I read at the Annual Meeting of the British Medical Association in August, 1907; they were as follows:

28 cases treated,
23 cases results satisfactory,
5 cases improved.

Within the last few weeks I have treated two further cases; one, that of a medical student who had failed several times through nervousness at his *viva voce* examination. After one treatment, which I gave him the week he went up for his examination, he passed easily, and felt not the least nervous.

The second case was that of a lady who had to make a speech at a philanthropic meeting. She wrote afterwards, and told me that she was not a bit nervous, and was able to express herself fluently.—I am, etc.,

London, W., June 8th. J. F. WOODS.

SIR,—In response to the invitation conveyed in the article on this subject in the JOURNAL of June 5th, I should like to say that I have had a long experience of the treat-

ment of such cases amongst voice users of all classes. There is no doubt that in a large proportion of cases medicinal treatment suitably administered has enabled the sufferer to overcome his trouble.

During the years that I was private assistant to the late Sir Morell Mackenzie, he used to treat large numbers of these cases with varying proportions of laudanum administered in strong coffee in doses of from 10 to 30 minims. I believe one of his prescriptions for some years went the round of the dramatic profession under the name of "First Night" or "Stage Fright Tonic." It is needless to say that the haphazard use of any prescription, no matter how eminent the prescriber, is doomed to failure in far more cases than it may chance to help.

The age, sex, and temperament of each patient have to be taken into account in treating this trouble. In some cases, owing to hereditary or acquired nervous peculiarities, no treatment is of any use for such special occasions, and no drug treatment that is not combined with efforts to improve the nervous stability is likely to be permanently beneficial, and may, if continued too long, lead to the worse evils hinted at in your article.

On general principles I do not think depressants such as bromides are likely to prove helpful. On the contrary, I believe the irritability present so often is the irritability of weakness, and that quite the opposite line of treatment is indicated. The patient is already sufficiently depressed by the accumulation of toxins in his system from increasing nervous metabolism as the time of trial approaches, as well as very often from other causes. The line of treatment should be by suitable diet, exercise, and, when necessary, medication, to get him into the best possible condition, and that this is the right course is shown by the success of those who have felt themselves able at the critical moment to dispense with drugs. When, however, one has to prepare such a patient for a near emergency, if time allows, it is well to order a calomel or other purge two days before "the great occasion," followed usually by a saline next morning. At a period of from fifteen to sixty minutes before the public effort has to be made the patient takes from 10 to 20 drops of laudanum in a small cup of pure strong coffee. Where a more sustained stimulation was desirable I have frequently added a few drops of tincture of cannabis indica with good results. In many cases the preliminary purge and the coffee will have the desired effect without the narcotics. Where these are given the medical man must exercise his own judgement and experience of such cases in hitting the doses likely to obtain the maximum and longest stimulating effect without risk of producing listlessness or even drowsiness later on in the performance. The purity and strength of the coffee is essential, and it would be better that the patient should take his dose of properly prepared coffee with him if the arrangements as to time are likely to condemn him to the use of any of the decoctions commonly sold under that name. The drugs should be prescribed in any suitable medium, with or without syrup, in a teaspoonful dose to be added to the coffee.

In a very great number of cases this treatment or the patient's faith in it has the desired effect. One cannot resist some scepticism as to what was the real share of the drug in people who never felt any need for such aid after the first occasion. There are, however, too many cases on record of eminent speakers, singers, and actors who have repeatedly felt the difficulties described, but who have been enabled to overcome them on these lines. Hypnotic suggestion has, I believe, been employed with good results in obstinate cases on the Continent, but I have no experience of its use in this country.—I am, etc.,

London, W., June 5th. JAMES DONELAN.

SIR,—If an etymology in one of the obscurer dictionaries were correct, the *Pharmacopoeia* itself would hold out a specific for stage fright in tinctura camphorae composita —"paregoric elixir." There is the general sense of "soothing" in παρηγορέω, παρηγορικός, like that of eloquence upon the crowd; the medical use of the word, however, is not metaphorical, but is derived from what the orator would take to allay his own perturbations when he stood up (— παρα + αγορα —) in public.

I cannot now find my authority. One has seen a mental invalid called back for a time to intelligence and brilliance by a single dose of opium, and has known phosphorus carry through an examination a distracted and sleepless student.—I am, etc.,

Bristol, June 8th. D. A. ALEXANDER.

SCHOOL CHILDREN AND THE HOSPITALS.

SIR,—May I be allowed to offer some comments upon the circular issued by the Council of the Metropolitan Counties Branch to its members on the subject of the treatment of school children?[1]

As the circular indicates, parents able to pay for the treatment will be referred to their medical practitioner, and it is in reference only to those children whose parents cannot afford to pay that the Education Committee of the London County Council has recently issued to the London hospitals a letter of inquiry as to how far each is willing to assist in carrying out the treatment of certain ailments of the eye, ear, and skin. The circular calls on members of the Branch to oppose what is characterized as a proposal to take advantage of the voluntary hospital charities, because "it really involves a large increase in the unpaid work already done by the medical profession."

Although estimates exist as to the number of children suffering from the ailments in question, there are none, that I am aware of, which show the number of school children already being treated for them by existing institutions, and in default of such figures it is not possible to estimate what the increase in the number applying to hospitals would be if they were systematically notified by the school doctors. No doubt the effect at first would be to increase the numbers considerably, but when the arrears of these children had been cleared off the increase, if fairly distributed among existing institutions would not, I believe, be very great in any one of them.

Children, too, would no doubt come under treatment at an earlier age than at present, but this would not increase the total number to be treated.

If the *x*-ray treatment of ringworm proves to be as successful as expected, the number of children under treatment for that disease will very rapidly decline, and the unfortunately decreasing numbers in children attending the schools will tend in the same direction as regards all diseases.

The letter of the County Council is not a proposal to send an unlimited number of these children to hospitals, but an inquiry as to how far they are willing to co-operate with the London County Council; and to this inquiry the circular of the Branch suggests the reply, "Not at all"—that is, the hospitals are to decline to continue treating any school children for these ailments, because there is a prospect of the number being increased.

The circular urges that the London County Council proposal involves a diversion of the funds of charitable institutions from the purposes for which they were intended. But why the treatment of ringworm and eye and ear affections, till now regarded as appropriate for hospital treatment, should become a diversion of hospital funds immediately that their importance is recognized by the London County Council is not apparent.

The connexion between the "principle" adopted by the Association that the out-patient departments shall be consultative institutions, and the inference drawn from it by the Branch, does not appear to be very close, but even if the consultative principle be accepted it does not appear to be infringed by a proposal that children shall be treated who come with a notification from a school doctor. If the "principle" involves that a child otherwise eligible for out-patient treatment (as necessitous children are) becomes ineligible when its ailment is discovered and notified by a school doctor, then I think the principle is unsound. The Branch portion of the paragraph is merely a statement of opinion, that a child eligible for treatment forfeits its right to it if its qualification is detected by the State—that is, the London County Council.

The circular further protests against capitation grants on the ground that it is "undesirable, and the attempt to allot such on hospital work would be obviously impossible." The impossibility is open to question, and as hospitals

[1] See SUPPLEMENT, p. 387.

receive payments from householders, from employers of labour, from public companies, from the Hospital Sunday Fund, and even in some cases from the Poor Law, giving in return letters admitting to treatment, there is nothing in their constitution or custom to prevent their receiving capitation grants from the London County Council. And the dictum of the Medico-Political Committee that capitation grants are undesirable, cannot be taken as the last word on the subject. Finally, the circular denounces the proposals as contrary to the public interest because the hospitals are in many districts not conveniently situated. No doubt this is so, but why it should be opposed to the public interest for existing institutions to carry on the work where they are conveniently situate, because in other districts it is not possible, is not apparent.

So far as can be gathered from the circular, it is proposed that the hospitals shall decline all cases of the diseases which the London County Council specially name as important to be treated. But it is to be remembered that all children of the hospital class are London County Council children, and, if the principle of refusing school treatment for these affections is to be carried out, *all* London children must be refused treatment for these complaints; it would be absurd to accept for gratuitous treatment a school child brought by its mother on her own initiative with ringworm or eye affection, and to refuse at the same time another of her children brought with the same affection, but with the notification of a school doctor, and for whom the London County Council offers a contribution to the hospital funds. Both are school children, and, if one is to be refused, so must the other, and hospitals must decline to treat all London children whose ailments have been selected by the London County Council as specially important. Again, if school children are to be refused treatment for certain parts of the body, are they to be accepted for other parts of the body? Is a child to be refused treatment for ringworm or eye defects, and to be accepted for enlarged glands or for rickets? And how far is this division of the body into diseases which are eligible and diseases which are not eligible to be carried? Very likely the London County Council will at times add another to their list of affections which they deem to be of importance; are the hospitals each time to revise their list of boycotted diseases?

The opposition of the Branch Council will result, if carried out, in this—that no London children shall be treated in a hospital out-patient department. And among other things, the hospitals, and especially the children's hospitals, would be deprived of any children out-patients for purposes of medical education.

If the hospitals refuse to treat the affections named by the London County Council, the alternative appears to be the establishment of municipal clinics. These will require large waiting rooms, as each child will be accompanied by a mother and often by other children, who cannot be left at home. Cases of infectious disease, especially when throat cases attend, will inevitably come to the clinics, and there must be isolation rooms. Some children will be unfit after operation to return home at once, and beds will soon be wanted. A pathologist and laboratory are essential, and a staff of clerks, nurses, and porters. The municipal clinics will be extensive and costly, and even if the London County Council does not soon add to its list of diseases (adenoids are already ready for nomination), and the hospitals inconsistently continue to treat some school children, the clinics will soon become municipal hospitals.

It is suggested that the profession will be benefited by this. Is it likely that more money will go into their pockets if the London County Council have to erect municipal buildings than if they pay grants to existing hospitals to be devoted to the expenses of the out-patient departments concerned, and which will provide salaries for qualified clinical assistants? I think not; and so far from the labours of the honorary staffs being increased, they will be lightened by such assistants. I venture to hope that the members of the hospital staffs to whom special appeal is made in the circular will not without full consideration decline to discuss with the London County Council their proposals. Although municipal clinics may be required in some districts, there is no sufficient reason why arrangements shall not be made by hospitals with the London County Council (at any rate, provisionally for a year or so, after which the matter could be reconsidered) whereby school children shall continue to be treated by the hospitals to the advantage of the profession and of the public.—I am, etc.,

London, W., June 9th. SIDNEY PHILLIPS.

"FACTS" AND "THEORY" REGARDING THE TREATMENT OF SEVERE ANAEMIAS.

SIR,—Your readers may be interested to hear that my so-called "theory" of infection, which the writer of a paper in your issue of June 5th (p. 1347) refers to, and attempts with imperfect success to describe in a few words, is going on very well, and has grown quite a strong young fellow, thanks to his original excellent constitution. He attains his majority this year, which is quite remarkable, considering that, being only a "theory" founded on twenty-five years' work, he ought to have been dead and buried long ago.

It may also interest them to know that the "facts" about successful treatment with bone marrow, which the writer describes and dwells upon with seeming satisfaction, are unfortunately in rather a sad way. For it happens to be known to me, although obviously not known to the writer of the paper, that both the "successful" cases which he refers to had relapsed, and one of them at least was dead some three to four weeks before he was recorded as cured! It was distinctly unfortunate that he died in the short interval of a month or two between the time of writing and the publication of the author's paper. It was truly "pernicious" on his part to do so.

But it only serves to illustrate what I have in a recent new work on these anaemias demonstrated from cover to cover—namely, that the hollow mockery of the so-called "facts" of etiology, clinical features and diagnosis associated with the name "pernicious," which for the past thirty to forty years have deluded the profession and made the poor patient's disease a terrible tragedy, follows the latter even into their graves. One to two years after they are dead; they are still reported on as wonderful examples of cures!

Now, Sir, what I have attempted to do is to deprive this astounding disease alike of its pernicious mystery and its pernicious name. That and a hundred and one other facts are involved in what my friendly detractors still continue to term to their own satisfaction a "theory," "contention," "hypothesis."

I therefore throw them out a challenge which they can, singly or collectively, meet as may seem good to hem.

I notice in the literature of the past seven years or so a steadily increasing number of references to the improved prognosis of these anaemias and their greater amenability to treatment than formerly. My challenge is therefore the following: Will any observer or group of observers point to any single measure of treatment—*other than those connected with, and suggested by, my work regarding the infective nature of these anaemias*—which during this period differs in any form or degree from the measures previously adopted?

Even the writer who terms my work a "theory" states that certain of the measures—which he very inadequately describes—"should *never be neglected*." Why so, if they are only based on a "theory"? As a matter of fact, the treatment based on this "theory" is, as I know from scores of cases sent to me, and from information on every hand, being carried out in an increasing number of cases daily. What useful purpose, then, is served by terming it a "theory," thereby blinding the eyes alike of doctors and patients to its real nature and value, and perpetuating even in treatment the pernicious confusion which has characterized these diseases from first to last?—I am, etc.,

London, W., June 8th. WILLIAM HUNTER.

SANITARY PROGRESS IN THE BRITISH WEST INDIES.

SIR,—I was very much interested in reading Sir Rubert Boyce's account of recent sanitary progress in the West Indies published in your issue of June 5th, 1909. As long ago now as 1901 I made a similar visit for the London

School of Tropical Medicine to the same islands and British Guiana, including also St. Kitts, as the governor and inhabitants specially requested the Colonial Office that I should not omit them in my tour. Filarial diseases and other mosquito-borne maladies were the objects of special study, opportunities being taken at the same time to instruct the populations of the different places in respect to mosquito prophylaxis. About this time Professor Ross was carrying out experiments for the destruction of *Anopheles* in Africa, and the Americans in Cuba had just proved the part *Stegomyia* played in the transmission of yellow fever, so that things were ripe for useful work.

Largely owing to the energy and interest which Sir Frederick Hodson, the Governor of Barbados, took in the subject, I followed out a plan of campaign very like that described by Sir Rubert Boyce—namely, giving lectures to the medical profession, more popular ones to the laity, and a course of special lectures to the sanitary inspectors of the island. Examination of yards, special localities and breeding grounds were also carried out, and one specially interesting fact was soon discovered—namely, that there were no *Anopheles* mosquitos in Barbados. This coincided with the clinical experience of the physicians there—that there was no indigenous malaria amongst the population. It soon became evident that it was useless for a few individuals to destroy the common mosquitos found in houses if the general population was to remain apathetic, so I suggested to Sir Frederick the advisability of having a law passed to enforce their destruction, the penalty for not doing so being a fine, a similar procedure to that adopted by the Americans in Havana. The measure came up for discussion after I had left the island, and I believe was rejected; it is therefore specially interesting to hear that six years afterwards such a measure is actually in force.

I found little difficulty in persuading the medical men of the different places visited as to the part the mosquitos played in the spread of disease; it was the laity who were specially conservative and unprogressive, and even then perhaps things might have moved more quickly if the necessary funds had been available. There is little doubt that progress in mosquito destruction in some British Colonies is wofully behind that in American possessions (Havana, Colon, Panama, etc.), but still there is now an advance even in the West Indies; and one must be grateful for that. It would be a pity that the good work Sir Rubert Boyce has helped to carry on should be allowed in any way to stand still or go back; and though perhaps a meeting of the British Medical Association in Trinidad or Jamaica will not take place, I should suggest that the Colonial Office or one of the tropical schools should send some one every three years or so to the West Indies to study the progress made, and to advise on further sanitary developments. Persuade the merchants that no mosquitos mean no yellow fever, and a great deal can be done.—I am, etc.,

London, W., June 5th. GEORGE C. LOW.

SPINAL ANAESTHESIA.

SIR,—I trust you will allow me space to criticize briefly the announcement emanating from the London Hospital, with regard to the method of inducing analgesia by the intraspinal injection of stovaine, which appeared in the *Daily Mail* of June 3rd.

As a hospital surgeon, it appears to me, as it probably does to most of my professional brethren, that the action of the House Committee of the London Hospital in issuing any report on so purely scientific a matter as this, is at least very unusual. With every respect for the good intentions of that committee, one cannot help thinking that any such report should have come from the professional staff of the hospital and not from the members of the lay committee.

Quite apart from this question, however, there is another which is of much greater importance. The report, coming as it does from so influential a source as that of our largest London hospital, must in the eyes of the public at least inevitably bear the stamp of authority, and by suggestion lead that public to suppose that the conclusions arrived at (and with which I have no fault to find) are the outcome of the energetic work and the personal experience of the staff of this well-known hospital. But this I have reason to believe is by no means the case. On the evidence of a member of the House Committee of the London Hospital, as well as from other sources, I am given to understand that the method has neither been accepted by the hospital authorities nor practised by the staff of the hospital to the extent which obtains in many other quarters, and certainly not to such an extent as to warrant the House Committee of the London Hospital taking a stand as an authority on the subject. In doing so they are unquestionably robbing University College Hospital of the just claim to be considered the first and foremost hospital in London to place this method on a sound and sure basis. At least two other hospitals—namely, the Seamen's Hospital, Greenwich, and the Hospital of the Royal Army Medical College, Millbank, have long been able to show results which the House Committee of the London Hospital would appear, at least by inference, to lay claim to. That the work done by the London Hospital is admirable, no one who knows anything of surgery will deny; but that its House Committee should lay claim to constitute itself an authority on the subject of spinal analgesia, is a matter which cannot be allowed to pass unchallenged. If the conclusions at which it has arrived are the result of work carried out in the wards of the London Hospital, it would have been more satisfactory and extremely interesting, if the statistical evidence on which the conclusions are founded had been given to the medical profession; if, on the other hand, these conclusions are drawn from the work done in other hospitals, would it not have been more courteous to these hospitals, and less misleading to the public, to have acknowledged the source of the information obtained?—I am, etc.,

London, W., June 7th. LAWRIE MCGAVIN.

THE BRITISH MEDICAL BENEVOLENT FUND.

SIR,—Local secretaries of the British Medical Benevolent Fund confine their appeals for aid to their own districts and have intimate knowledge of the persons benefited by the charity administered by the central committee. A good many years have passed since I first took an active interest in the fund, and my experience of the generous methods of those who have carried on the work, in spite of indifference and financial difficulties, has been that the cases recommended have been relieved quietly and promptly. No doubt this is a common experience among local secretaries. I am moved to write to you to-day because I have received a letter from one of the beneficiaries of the fund which illustrates the operations of this most deserving charity. The case is only too common—a lady left with a family of young children almost unprovided for owing to the early death of her husband, who was in general practice of the more unremunerative kind. She is handicapped by cardiac troubles, and her life has been a record of strenuous toil. The fund has been her mainstay, a grant of £12 a year, repeated year by year, has relieved her of anxieties about house rent, and she has striven for the education of her children with that and other aid. It is a small grant, strictly limited by the narrow means at the disposal of the committee, yet she says:

> My experience of life during the last ten years has been so hard that I feel almost too tired to write about it. I don't understand how anyone could hesitate in helping such a fund, especially educated men who know how many benefit from it, and what a help it is to those who many a time do not know how to get a decent meal.

I might also cite a case of suffering prolonged through many years—a practitioner who had saved some little money when he was rendered useless by paralysis. When my attention was directed to him he was living in the humblest manner at an expenditure of 6s. a week. His bodily state was deplorable, and he was torn by anxiety. His savings were almost exhausted after some twenty years of invalidism and incapacity, and he lived in dread of an appeal to the parish. I was enabled to assure him that the fund would undertake to provide for him as soon as his money was exhausted. His mind was relieved, his gratitude was painful to witness, until death relieved him from his "mattress grave."

I know very well that there are only too many of the less fortunate doctors who are quite unable to subscribe to the British Medical Benevolent Fund—one of them, indeed, lately said, "You have no idea what half a

crown means to me just now." And I know quite as well that there are very few whose income reaches a comfortable competency even in these days of great wealth; but I am impelled to add that the apathy of those who are unconcerned by the necessities of silent and suffering poorer brethren is shameful to members of a liberal profession. We, who endeavour to direct their attention to the limited resources of the fund and the urgency of the claims made upon it do not ask for great sacrifices or notable contributions: we merely plead for the steady annual subscription of moderate sums. If every medical man on the *Register* gave 5s. the result would be some £10,000 for yearly distribution. The accounts of the grant department for 1907 showed receipts barely reaching £1,700. For the credit of the profession, for the necessities of our poor, it is not enough.—I am, etc.,

Perth, June 7th. A. R. URQUHART.

"THE DOCTOR AS A VICARIOUS PHILANTHROPIST."

SIR,—I fear Dr. Wishart Kerr's suggestion will not commend itself to the bulk of the profession. Not many of us would have the fortitude to risk the "cursing of a hostile and threatening crowd" outside our surgeries (which are generally also our homes), and indeed I cannot but think that we should fall in our own estimation as well as in that of the crowd. In such a case as Dr. Kerr describes, it seems almost our duty to give our services gratuitously; the patient cannot guarantee remuneration, and there is no onus on any of the crowd to do so. Our assistance, skilled though it is, is but what we owe of humanity to the unfortunate victim; moreover such cases (street accidents) are rare, perhaps two per annum to each medical man, and entail no serious loss of income or derangement of business.

Night calls are in another category; they are demanded by responsible persons—the patient himself or his friends—and entail a serious disturbance of rest and health; but even they would be better dealt with on another basis than that of pecuniary reward. My custom is to *refuse all night calls except from my own patients.* I have no "red lamp," as I wish nobody to find me at night except those who can do so without a directing light. Night calls are made on a doctor by strangers generally because they fear their own doctor (to whom they already owe money) will not go; and my answer to such is that my own patients give me all the night work of which I am physically capable, and that theirs is the responsibility and duty of keeping on good terms with their doctors.

I commend this plan to my professional brethren. Night calls (even if paid for) are a poor source of income. Never admit any question of a fee, and one's position will be a great deal pleasanter in the event of the matter becoming public.—I am, etc.,

Bristol, June 5th. HARRY GREY.

MANCHESTER (WEST) DIVISION.

SIR,—In the account of the proceedings of the General Medical Council, published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of June 5th, certain assertions appear which imply that the Manchester (West) Division has dealt with the complaint against Dr. C. W. Brown, a member of the Association, residing in the Division.

As Honorary Secretary of the Division, I beg to state that no complaint against that gentleman has ever been received by me, and that neither the Division nor its Executive Committee has at any time discussed this case or taken any action whatever in connexion therewith.—I am, etc.,

J. SKARDON PROWSE,

Manchester, June 8th. Hon. Sec., Manchester (West) Division.

SIR,—In justice to the Honorary Secretary of the West Manchester Division, may I ask you to correct a self-evident error which has crept into the summary of my evidence before the General Medical Council on May 26th last?

From the printed report, it would appear that the Honorary Secretary had informed me that the complaint of Dr. Paterson had been received and considered by the West Manchester Division; this is incorrect; the evidence given by me was to the effect that the Honorary Secretary had informed me that the West Manchester Division had *not* considered, much less decided to prosecute, a charge against Dr. Brown, and I further supported this statement by pointing out that, by the rules of the Division itself, as no notice of complaint had been sent to the person accused, the Division *could not* have considered the complaint, and much less could they have taken a vote on it!

This evidence was given by me in reply to questions asked by Mr. Bodkin with the object of rebutting the opening *statement of the prosecution* that the complaint *had been* considered by the West Manchester Division, and was now brought before the General Medical Council by the unanimous request of that Division; and this evidence was made further use of by Mr. Bodkin for this purpose in his opening address on the following day.—I am, etc.,

Manchester, June 8th. T. ARTHUR HELME.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

Prizes in Botany and Zoology.

THE Vice-Chancellor has received an offer from Mr. Francis G. Smart to give £600 to found an annual prize for Botany and Zoology respectively.

Degrees.

The following degrees were conferred on June 3rd:

M.D.—M. A. Cassidy, Cla.; C. W. Ponder, Emm.; R. N. Hart, Sid. Suss.

M.B., B.C.—K. M. Walker, Gonv. and Cai.

UNIVERSITY OF LONDON.

Meeting of the Senate.

A MEETING of the Senate was held on May 19th.

Recognition of Teacher.

Dr. William H. Willcox has been recognized as a teacher of forensic medicine at St. Mary's Hospital Medical School.

Amendment of Regulations.

It was resolved that the following should be substituted for Section 17 of the Regulations as to approved courses of study (Red Book, September, 1908, p. 9):

> A student who has matriculated in January, or has been exempted from matriculation under Statute 116 as from January, may be registered as an internal student as from the date of the beginning of his course of study, provided that such date be not anterior by more than four months to the date of the first day of the matriculation examination which he passed, or in respect of which he was registered, and that the present regulation shall not apply to students who matriculated or were exempted from matriculation before January, 1906.

Brown Animal Sanatory Institution.

Mr. F. W. Twort, M.R.C.S., L.R.C.P., has been appointed superintendent of the Brown Animal Sanatory Institution for three years from June 1st, vice Professor T. G. Brodie, M.D., F.R.S., resigned.

Mr. Malcolm Allan, M.R.C.V.S., has been reappointed Veterinary Assistant for the coming year.

The annual report of the Committee of the institution stated that the number of cases treated last year as out-patients was 6,264, and as in-patients 699.

Amendment of the Scholarships Regulations.

It was resolved that the following amendments be made in the scholarships regulations (the references are to the *Calendar*, 1908-9):

> (*a*) On page 264 insert the following:
> 11. The term "matriculated students" as used in these regulations includes all students who are registered as matriculated students of the university by reason of having passed the matriculation examination of the University of London either in its ordinary form or in the form of the school examination (matriculation or higher standard) conducted by the university for its school-leaving certificate, or an examination accepted in lieu of the matriculation examination under the terms of the statutes, Section 116.
> (*b*) On page 263, Regulation 5, line 3, for "with the receipt for," substitute "before the payment of."
> (*c*) On page 265, line 1, for "paragraph" substitute "paragraphs."

Instruction in Practical Midwifery for the M.B., B.S. Examination for Internal and External Students.

In connexion with the recommendation of the Faculty of Medicine suggesting that the teaching of practical midwifery in the wards of a lying-in hospital or lying-in ward of a general hospital should be made compulsory as soon as practicable which the Senate on May 13th, 1908, directed to be sent to the medical schools of the universities and other medical schools

from which certificates were received, the Senate on May 19th, 1909, adopted the following resolution:

That, in order to allow the medical schools of the University and the other medical schools from which certificates are received for the M.B., B.S. examinations to take time to complete the necessary arrangements for the teaching of practical midwifery in the wards of a lying-in hospital or the lying-in ward of a general hospital, further action in connexion with the resolution contained in Minute 2333 of May 13th, 1908, be postponed for twelve months from the present date; and that the schools in question be informed accordingly.

B.Sc. (Honours) Degree in Human Anatomy and Morphology.

It was resolved that for internal students the following be substituted for paragraph A (Red Book, September, 1908, p. 207).

A. Candidates who have passed the second examination for medical degrees as internal students.* Such candidates must pursue a further approved course of study extending over one year, and must have attended . . . (The rest of the paragraph as at present.)

For internal and external students: That for the words (Red Book, September, 1908, p. 209; Blue Book, p. 311): Subsidiary subjects, Physiology, Zoology, be substituted the following:

Candidates for the B.Sc. (Honours) degree in Human Anatomy and Morphology will not be required to present any subsidiary subject.

The Senate.

Dr. E. G. G. Little (Convocation, Medicine), Mr. H. H. Clutton (Royal College of Surgeons of England), and Professor E. H. Starling, F.R.S. (Faculty of Medicine) have been reappointed to the Senate, while Sir William H. Allchin succeeds Dr. P. Pye-Smith as the representative of the Royal College of Physicians of London on the Senate.

Appointment of Representative.

Dr. E. G. G. Little has been appointed the Representative of the University at the Health Congress to be held at Leeds in July, 1909.

Boards of Examiners for Medical Degrees.

The following have been elected chairmen in the subjects ndicated for the first and second examinations for medical degrees for internal and external students: *Anatomy*, Professor J. Symington, M.D., Ch.M., F.R.S.; *Chemistry*, Mr. J. A. Gardner, M.A., F.I.C., F.C.S.; *Biology*, Mr. F. E. Beddard, M.A., F.R.S.; *Pharmacology*, Professor A. R. Cushny, M.D., C.M., M.A., F.R.S.; *Physics*, Mr. A. W. Porter, B.S.; *Physiology*, Professor G. A. Buckmaster, M.D., B.Ch., M.A., D.P.H.

Advanced Lectures in Physiology.

Professor E. H. Starling's course of lectures on recent advances in physiology has been postponed until next term.

University of London Lodge of Freemasons.

Dr. Robert Henry Cole has been elected Master for the ensuing year.

London (Royal Free Hospital) School of Medicine for Women.

The following scholarships will be awarded on the result of the Intercollegiate Scholarships Board examination to be held on September 21st and the following days:

1. The School Scholarship, value £30 a year for one year, open only to candidates who have passed a recognized preliminary examination and are not holding any other scholarship. The successful candidate will be required to enter at once upon a full course of medical study at the school. Students who have been at the school only one term can also compete for this scholarship.

2. St. Dunstan's Medical Exhibition, value £60 a year for three or five years. Candidates must be: (1) Not more than 20 years of age on June 1st, 1909. (2) Resident in the Metropolitan Police district area for the past three years or longer (this area includes a large district round London). (3) Matriculated students of the University of London. (4) In the opinion of the governors in need of such an exhibition for the prosecution of their medical studies.

The Fanny Butler Scholarship, value £14 10s. a year for four years, is open only to candidates willing to practise in connexion with the Church of England Zenana Missionary Society, 27, Chancery Lane, W.C.

THE VICTORIA UNIVERSITY OF MANCHESTER.

THE CHAIR OF ANATOMY.

ALL medical students past and present who have had the opportunity of working under Professor Young at Owens College will most sincerely regret that ill-health has compelled him to retire from the Professorship of Anatomy at the Manchester University.

The post has now been filled by the appointment of Mr. Grafton Elliot Smith, Professor of Anatomy in the Government School of Medicine at Cairo. Professor Smith graduated at the University of Sydney in 1893, and obtained the degree of M.D. in 1895 with first class honours and the university medal. After acting as house-physician and house-surgeon in the Royal Prince Alfred Hospital of Sydney, he was demonstrator of anatomy for two years under Professor J. T. Wilson. He obtained a travelling Fellowship of the University of Sydney, and proceeded to Cambridge, where he took the degree of M.A. in 1902. He was elected to a Fellowship of St. John's College, and was appointed Demonstrator of Anatomy. Later he was appointed Professor of Anatomy in the Government School of Medicine at Cairo. He has done a considerable amount of original work in embryology, anthropology, and surgical applied anatomy, and was director of the archaeological survey of Nubia. He was selected in 1905 to make the official catalogue of royal mummies at the Cairo museum. He is author of *The Brain in Reptiles and Mammals*, and is perhaps best known for his researches on the anatomy of the brain and nervous system.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

VISCOUNT TREDEGAR, who, since its establishment, has frequently given practical proof of his interest in the college, has just expressed his intention of contributing another £5,000 towards the new college fund; this brings his donations towards the building fund to £12,500. His first was a sum of £2,500, given on the occasion of the first effort made to establish a building fund. Viscount Tredegar is the largest of all the private donors. The Drapers' Company of London has contributed £16,000 towards the new library; Mr. Harry Webb has also given £500 towards the building fund.

ROYAL COLLEGE OF SURGEONS.

THE COUNCIL ELECTION.

THE number of candidates for election on the council now amounts to seven, and the list is complete, as no more applications can be received. The three retiring members of council—Sir Watson Cheyne, Mr. Mayo Robson, and Mr. Clement Lucas—seek re-election. There remain four candidates. The senior of the four as a Fellow of the College is Mr. Harrison Cripps (Fellow, June, 1875; Member, July, 1872); the second is Mr. C. H. Ballance, M.V.O. (Fellow, June, 1882; Member, July, 1879); the third, Mr. Bland-Sutton (Fellow, June, 1884; Member, April, 1882); and the fourth, senior to Mr. Bland-Sutton as a Member but junior as a Fellow, is Mr. Walter Hamilton Hylton Jessop (Fellow, December, 1884; Member, 1880).

Our annual analysis of the council, including the proportional representation of medical schools and provincial hospitals, will be found in the JOURNAL for May 22nd, p. 1272. The contest—as all the three retiring members seek re-election, and all the four candidates are well-known surgeons—will be of unusual interest. Mr. Harrison Cripps has twice served on the council as a substitute member, and distinguished himself as Chairman of the Finance Committee. Mr. Ballance, M.V.O., has won wide renown as an authority on the surgery of the brain and the great arteries. Mr. Bland-Sutton is a leader in gynaecological surgery, and Mr. Jessop is Ophthalmic Surgeon to St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE sixty-sixth annual meeting of the Royal College of Surgeons in Ireland was held on June 5th, when the chair was occupied by Mr. John Lentaigne, the President.

Finance.

The Auditor's certificate for the year showed that the receipts for the year amounted to £4,174 3s. 8d., leaving a balance due to bank at close of year of £121 1s. 9d. The general investment account shows a sum of £9,469 18s. 11d., while there are the usual sums invested for prizes.

Diplomas.

Nineteen candidates were admitted to the Fellowship. Forty-seven candidates received the Conjoint Diplomas in Medicine, Surgery, and Midwifery of the Royal Colleges of Physicians and Surgeons. One candidate, a registered practitioner, was admitted a Licentiate. Twenty-seven candidates received the Conjoint Diploma in Public Health of the Royal Colleges of Physicians and Surgeons. Sixteen candidates received the Licence in Dental Surgery. Seventy candidates having passed the Conjoint Preliminary Examination with the Royal College of Physicians received certificates.

Physical Education.

It was moved by Dr. J. B. Story, and carried unanimously:

That having regard to the importance of physical education, and the neglect with which it has hitherto been treated in Ireland, it is desirable that representatives of the medical profession, as such, be appointed upon the Board of National Education and upon the Board of Intermediate Education.

Election of Officers.

At a meeting of the Fellows held on June 7th, the following were elected officers for the ensuing year: President, John

* Students who have passed in Anatomy and Physiology at the second examination for medical degrees as internal students will be allowed to submit for the B.Sc. (Honours) degree in Human Anatomy and Morphology a course of study extending over one academic year from the date at which they passed in the subjects enumerated above, but in no case shall they be allowed to present themselves for such B.Sc. (Honours) examination unless they shall have passed the second examination for medical degrees (or the intermediate examination in science subject to the conditions given under B. below).

Lentaigne; Vice-President, Robert H. Woods; Secretary of the College, Sir Charles A. Cameron, C.B.; Council, Sir Henry R. Swanzy, William Stoker, Sir Charles Alexander Cameron, C.B., John B. Story, Sir Charles B. Ball, Sir Thomas Myles, Sir Arthur Chance, Richard D. Purefoy, Sir Lambert H. Ormsby, Henry G. Sherlock, R. Bolton M'Causland, R. Lane-Joynt, William Taylor, Edward H. Taylor, G. Jameson Johnston, R. Charles B. Maunsell, William Ireland Wheeler, D. Edgar Flinn, Thomas E. Gordon.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

D.P.H., Parts I and II.—W. W. Browne, Captain, R.A.M.C. (with Honours); R. F. O'T. Dickinson, Lieutenant, R.A.M.C.; B. D. Gibson; D. J. O'Connor; N. D. Walker, Captain, R.A.M.C.

Medico-Legal.

SLANDER ACTION AGAINST A MEDICAL MAN.

JUDGEMENT has been given in the Falkirk Sheriff Court against Dr. Gardner in an action brought against him by a nurse. This nurse averred that Dr. Gardner had said of her that she was no nurse at all, that no respectable persons in Falkirk would let her into their house, and she had no right to wear uniform. She claimed £250 in the name of damages. The pursuer also stated that Dr. Gardner had said of her that she was a dangerous woman, that the condition her children were in was owing to her drinking, and if the worst came to the worst he could prove that that she was a dirty woman. Dr. Gardner denied having slandered Nurse McLachlan, and pleaded that in any case what he said was privileged in view of his position of medical attendant to the persons to whom the statements were made. Sheriff Mowatt, in his judgement, finds the first of the statements not proved, but finds it proved that the defender said of the pursuer that she took drink, and that the condition her children were in was owing to her drinking. He also finds that the defendant said of the pursuer that she was a dangerous woman, and that he would prove she was dirty, and that on neither occasion was the statement in any way privileged. The damages were assessed at £10, with expenses.

Public Health AND POOR LAW MEDICAL SERVICES.

LOCAL GOVERNMENT BOARD IN ENGLAND.

SCIENTIFIC INVESTIGATION.

IN connexion with the annual grant voted by Parliament in aid of scientific investigations concerning the causes and processes of disease, Mr. Burns, the President of the Local Government Board, has authorized the following special researches:

1. A continuation of the investigation into protracted and recurrent infection in enteric fever, by Dr. Theodore Thomson, Medical Inspector of the Board, in conjunction with Dr. Ledingham of the Lister Institute.

2. A continuation of the investigation into protracted and recurrent infection in diphtheria, by Dr. Theodore Thomson and Dr. C. J. Thomas.

3. A continuation of the investigation into flies as carriers of infection, by Dr. Monckton Copeman, Medical Inspector of the Board, and by Professor Nuttall of Cambridge.

4. A continuation of Dr. Andrewes's investigation on the presence of sewage bacteria in sewer air, with a view to ascertaining their number and the distance they can be carried by air currents. Also a continuation of Dr. Andrewes's investigation into the part played by changes in bone marrow in the defensive mechanism of the body against infection.

5. A continuation of Dr. Savage's investigations on the bacterial measurement of milk pollution, and on the presence of the Gaertner group of bacilli in prepared meats and allied foods.

6. An investigation into the chemical and physical changes undergone by milk as the result of infection by bacteria, and into the relation of the pancreas to epidemic diarrhoea, by Dr. H. A. Schölberg, Lecturer in Bacteriology in University College, Cardiff, and Bacteriologist to the Glamorgan and Cardiff Council Councils; and Mr. Wallis, Lecturer in Physiology, University College, Cardiff.

7. An investigation of the records of charitable lying-in hospitals as to the nutrition of the mother and other factors influencing the vitality of infants and their progress in the first fourteen days of life, by Dr. Darwell Smith, Physician to the British Lying-in Hospital.

8. An investigation into the occurrence and importance, in relation to treatment, of mixed infections in pulmonary tuberculosis, by Dr. Inman, Pathologist to the Brompton Hospital for Consumption.

9. An investigation on the relative importance of certain types of body cells in defence against the tubercle bacillus, and the effect of tuberculin and other remedial agents on their activities, by Dr. J. Miller, Pathologist to the General Hospital, Birmingham.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE following document has been sent by the Honorary Secretary of the Winchester Division, with a request that it should be published in the JOURNAL:

> The Court of Governors of the Royal Hants County Hospital have had their attention called to the recent provisions for Medical Inspection of Children.
>
> It would seem that provision is now made for the Medical Examination of all Children under Section 13, Subsection B, of the Education Act (Administrative Provisions), 1907, the duty of providing for such Medical Inspection is placed upon the local Education Authority. In the event of Children being certified to require medical care and attention, the Court of Governors consider it probable that it may become the custom to send many such cases to the special departments of the Hospital for treatment. It would seem that this idea has probably occurred to the Board of Education, inasmuch as Circular 596, dated 17th August, 1908, addressed to the Local Education Authorities, contains suggestions for contributions to Hospitals, Infirmaries, Dispensaries, etc. (Clause 78), and making it "permissible to include among the conditions of contribution a provision allocating a reasonable remuneration to the Medical Men working for such Institutions."
>
> The Court of Governors feel, after full consideration, that this latter proposal would be undesirable, and, greatly though funds are needed, could not be entertained. Any such scheme of payment would alter the whole of the existing arrangements and cause the Hospital to be worked on totally different lines and in a way which the Court of Governors could not approve. The Medical Staff attached to the Hospital give gratuitously their services to the Hospital Authorities, and the public owe them a great debt of gratitude. The Court of Governors feel that, having regard to the heavy demands that are made upon their Staff, they would not be justified in allowing general treatment of the numerous cases that must arise as the result of the Medical Inspection provided by the Act referred to, and they desire to suggest that the Local Education Authority should, before these questions arise, proceed to make arrangements for the discharge of these duties by the medical men in their respective districts, which they have ample powers to do.
>
> The Hospital will not object to taking, as at present, urgency cases, or other cases requiring, in the opinion of a responsible medical man, such care and attention as only the Hospital can supply.
>
> The Court of Governors desire to bring this matter before the Local Education Authority in order to allow ample time for provision to be made and to prevent any misunderstanding or difficulty arising.

TUBERCULOUS MEAT.

THE Corporation of the City of London has issued a circular for the information of meat salesmen within the City who, it is recognized, are anxious and willing to do anything in their power in the interests of public health and legitimate trading to prevent unsound meat being offered for sale. The circular states that for many years the Corporation has instituted legal proceedings, resulting in many instances in the infliction of heavy fines or terms of imprisonment against farmers, butchers, and other persons for sending diseased or unwholesome meat into the City markets, or for exposing such meat for sale. In some instances the offence may have been due to gross carelessness or even ignorance of the symptoms of disease in the living animal, or of the appearance of unsound carcasses after slaughter, and the object of the circular is to make public a memorandum by Dr. Collingridge, the Medical Officer of Health of the City, pointing out the signs of tuberculosis in the carcass and organs, and another by Mr. James King, M.R.C.V.S., Veterinary Inspector to the Corporation, on the symptoms in the living animals.

DRAINAGE OF LOW-LYING TOWN.

M.O.H.—Drainage of a small town where there is practically no fall presents special difficulties. At Chester, where sewage purification works were carried out by Major Hector Tulloch, C.B., R.E, the sewage has all to be pumped up before it can be purified, for the reason that it reaches the outfall 8 or 10 ft. below the level of the ground, which for miles on both sides is below the level of the river, and would be flooded but for embankments. It is pumped by suction gas engines and centrifugal pumps. The gas is made out of anthracite coal, and at the price of 24s. or 20s. a ton of coal the makers will now guarantee from 8 to 10-h.p. an hour for a penny. Centrifugal pumps are used, because any form of plunger pump is out of the question for sewage in which there is so much hard material like gravel, sand, etc., which wear out the surfaces of the brass plunger cylinders.

DIPHTHERIA: PERIOD OF QUARANTINE FOR CARRIER CONTACTS.

S. T. B.—It is not by any means the universal practice of medical officers of health to insist upon three negative results after the bacteriological examination of material taken from the throats of diphtheria patients or of contact carriers of the disease. There is no doubt that it would be a great advantage if the practice were universal, and also if the nasal passages were swabbed as well as the throat.

OFFICIAL TREATMENT OF DIPHTHERIA.

ULULA.—It is not usual, nor is it desirable, for a patient to be removed to an isolation hospital without any reference to the medical attendant, unless in exceptionally urgent circumstances. For the charge nurse of an isolation hospital to inject antitoxin (4,000 units) as a matter of routine in all cases of diphtheria admitted to a hospital is a practice to be deprecated. The injection should be made by the medical man in charge of the patient.

THE BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

DR. EDWARD CARNALL, D.P.H. (Newton Abbot) writes:

The number of cases admitted into provincial isolation hospitals of late years as diphtheria, when compared as regards population with the number of cases notified in a central London district, suggests the question whether the swab is to be relied on as a correct means of diagnosis.

In reading the reports of large central London institutions where patients are visited at their own homes and are treated at the dispensary one finds that out of a total of 35,455 patients only 25 cases of diphtheria have been sent to the Metropolitan Asylums Board hospitals during the past eight years. It cannot be said that the conditions under which this large number of people live is better or more hygienic than in small urban and rural districts; in fact, if any one visited some of the streets and courts of a London district they would be rather surprised to see the conditions under which some of the people live or exist.

As we all know, the throat is a part of the body most susceptible to influences (not of necessity sewer gases), such as changes of weather, foul air, state of our general health, and catarrhal conditions; it is easy to understand the number of so-called sore throats which fall to the lot of a dispensary doctor. As regards the swab, patients after a stay of twenty-one days or more in hospital will be returned as positive, when no sign whatever exists that the patient is or has been suffering from diphtheria. It is also noticed that children with enlarged tonsils, if treated locally and generally, will be returned also positive, and it seems to be impossible to obtain a negative result from such cases. The only reason why such cases are sent to the hospital is the swab return. Nothing is seen in the throat, nor has the patient even developed any symptoms of the disease. But the fact remains that all those cases after removal to the hospital, whatever the condition of the throat—there may be patches on tonsils or fauces—improve rapidly whether treated or not, which points to their real nature. I have also noticed that cases of what appears to be genuine diphtheria always return a negative result after the allotted stay in hospital. Whether we should admit cases to the acute wards of hospitals solely on the swab result is doubtful; for no doubt children have been admitted on swab evidence alone and developed diphtheria after admission, but have been saved by the prompt antitoxin injection.

Obituary.

WE regret to note the death on June 1st in St. George's Hospital of Mr. HENRY KAY RAMSDEN, M.B., B.Ch.Manch., of 102, Sloane Street, after a long and trying illness, borne with great fortitude. He died at the early age of 42 years the victim of a malignant growth in the lungs. He was one of four brothers, all members of the same profession, and was the third son of the late Dr. W. H. F. Ramsden, of Dobcross, Saddleworth, Yorkshire, to whose memory in 1900 the people of the district erected a fountain "for his devoted services to the people of Saddleworth," on which is inscribed a quotation from Leigh Hunt's "Abou Ben Adhem":

Write me as one that loves his fellow men.

The same words might fitly be chosen to characterize the son. As illustrating his courage and humanity the following incident is worthy of record. While surgeon to a certain workhouse infirmary he had ordered a generous meat diet for some of the inmates for whose recovery he thought it specially necessary. The guardians declining to supply it, in spite of his urgent representations, their surgeon ordered it at his own expense from a neighbouring hotel, and every day, accompanied by the cook bearing a large joint, walked through the streets from the hotel to the workhouse. These "meat-bearings" quickly developed into large processions of indignant sympathizers, and the guardians found themselves obliged to give way, and it is not surprising to learn that their surgeon had no further difficulty in getting his orders carried out. Mr. Ramsden had served as Civil Surgeon in the Boer war, and was Surgeon-Captain in the 2nd Battalion of the City of London Rifles. He was an ardent Freemason and a member of the Chelsea Borough Council.

Mr. GEORGE HENRY HAMES, who died on May 28th, at his residence, 11, Park Lane, was a well-known practitioner in the West End of London. He was a native of Lincolnshire. He joined the medical school of St. Bartholomew's Hospital in 1871, and distinguished himself as a student, winning several prizes. He obtained the diploma of M.R.C.S. in 1875, and that of F.R.C.S. in 1878. He was House-Surgeon to Sir William Savory; he also served a term of office as House-Physician. After quitting these house-staff appointments he attached himself to several other hospitals and dispensaries for a few years; but although he was distinguished as a good junior officer in all the appointments that he held, he decided early in life to devote himself to general practice, for which he proved eminently qualified.

Dr. CHARLES MARSHALL KEMPE, of Shoreham, died at his residence in that town on May 23rd. He had reached his 70th year, but, having regard to the fact that he was constantly to be seen about the town, and appeared to be in good health, his death after an illness of a day or two was the cause of much surprise as well as of the deepest regret. Dr. Kempe, a Cornishman by birth, and a student of St. Thomas's Hospital, became M.R.C.S. in 1861 and L.S.A. in 1863, and had long resided in Shoreham, where his life was one of great activity both in professional and non-professional connexions, and of marked public utility. On the professional side, in addition to private practice, he held at one time and another a large number of appointments. For some thirty years he was Medical Officer of Health for Shoreham, and a Medical Officer to the Steyning Board of Guardians. He was also a Medical Officer of Health to the Port Sanitary Authority, and Medical Officer to the Admiralty, to the Railway, and to the Order of Foresters. How fully he satisfied public expectations in these connexions is shown by his receipt of two illuminated addresses—one from the Shoreham District Council, the other from the local court of the Ancient Order of Foresters. The part he played in the local public life of the district was equally active. When the old School Board was in existence he was its Chairman for five years, and on its abolition he became Chairman of the local Education Authority. A zealous Freemason, he was a Past Master of the St. Mary of the Harbour Lodge, and one of the founders of the Duke of Richmond Lodge. He also took a leading part in the establishment of a soup kitchen in the town, and devoted a good deal of time to church affairs. He was often to be seen at public meetings in support of the Conservative cause, and was an excellent and popular speaker. He retired from practice some two years ago, but continued to co-operate in public affairs, and was this spring elected to a seat on the urban district council. Apart, therefore, from his attractive personal qualities, he must inevitably be greatly missed in the locality. He died on the Sunday preceding Empire Day, and as a mark of respect to his memory certain public proceedings in connexion with that festival were abandoned. Dr. Kempe was married, and leaves a family of three sons and three daughters.

THE London Spectacle Mission is stated, in its sixteenth annual report, to have received last year 2,915 applications for assistance. The society does not assist any one under the age of 25, its main object being to benefit old people of the poorer classes suffering from presbyopia. It was founded in the year 1886 by Dr. E. J. Waring, C.I.E., a retired medical officer of H.M. India Army, and until his death, in 1891, the mission was carried on at his sole expense. The honorary secretary is Miss C. Waring, 197, Sutherland Avenue.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

S. B. W. asks for statistics as to the comparative amount of food, in general or detail, consumed by the United Kingdom and the Continental countries. He also desires to ascertain the relative amounts for Ireland and Great Britain.

HERPES PREPUTIALIS.

P. D. asks for advice in the treatment of chronic herpes preputialis in a patient who has suffered for the past two years. It comes on very badly about every three months, and remains from two to three weeks; it has recently spread to the glans. Various kinds of local applications have been tried; also constitutional treatment for rheumatic gout, but without success.

THE BRONCHOSCOPE.

DR. CHARLES W. CHAPMAN (London, W.) asks for experience as to the value of the bronchoscope in the diagnosis of intrathoracic tumours in the early stage—that is, before they can be recognized by other methods, and whether any serious consequences such as haemorrhage have been known to follow the use of the instrument.

PENDULOUS EAR.

W. M. B. asks for advice as to any means, mechanical or operative, of correcting the following defect: The patient is a baby, 5 months old, whose right ear in its upper half is pendulous over the lower half. The cartilage at birth was found to have been displaced from the upper part of helix and antehelix to the skin in front of the ear over the zygoma. The ear after birth was strapped to the head with adhesive plaster, but no improvement ensued.

INCOME TAX.

E. C. B. has for many years made a correct income tax return for himself and partners. He has now received a request from the assessor or surveyor for certified copies of the partnership accounts for each of the past three years. Our correspondent has no certified accounts, no accountant being employed. He asks whether the Commissioners have power to make their demand, and what line of action should be taken.

*** On the first point we refer our correspondent to an answer given to "E. M. C." in the BRITISH MEDICAL JOURNAL for April 24th last, page 1043, where the question is fully answered. For the reasons there stated it will save trouble to "E. C. B." if he furnishes the accounts asked for, when the liability will be agreed to by the surveyor according to the results shown, with little or no difficulty. If an accountant is not employed the fact should be stated, when the surveyor will doubtless accept accounts signed by our correspondent as sufficient for his purposes.

ANSWERS.

APHONASIA.—We cannot depart from the rule against publishing anonymous communications. The name of the writer, however, need not necessarily be published.

DISAPPEARANCE OF MALARIA FROM ENGLAND.

"5814."—No complete satisfactory explanation has ever been offered of the disappearance of malaria from England. One suggestion is that many of the so-called cases were not really malaria at all, but on the other hand, provided that the weather is warm enough, there is no reason why it should not occur, as in many districts *Anopheles maculipennis* abounds. On the whole, however, this insect in England does not seem to bite readily, though, of course, it does so further south—in Italy, Spain, etc., where it is the chief propagator of the disease. Drainage can only have played a subsidiary part as it has certainly not stamped out all the mosquitos. The requisites for a case to appear are, of course, the following: (*a*) An individual with gametes in his blood. (*b*) The *Anopheles* to bite and so become infected. (*c*) A sufficiently high atmospheric temperature for the development to take place in the tissues of the insect. This latter condition would probably only be fulfilled in England in late July and August, so that the season is very limited in its possibilities.

LETTERS, NOTES, ETC.

LYNN THOMAS AND SKYRME FUND.

MR. WILLIAM SHEEN, M.S., F.R.C.S. (2, St. Andrew's Crescent, Cardiff), Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

Twenty-fourth List of Subscriptions.

J. Harris Jones, Maesteg	...	...	£1 10 0
S. P. Francis, Brecon	...	...	0 10 6

AN APPEAL.

THE following further subscriptions are acknowledged by Sir John W. Moore and Sir Charles Cameron in response to the appeal signed by the Presidents of the two Royal Colleges in Dublin on behalf of a medical practitioner in Dublin who, through no fault of his own, is in distressed circumstances. The appeal was published in the JOURNAL of May 15th, p. 1211:

	£	s.	d.
Amount already acknowledged	22	19	0
Dr. A. J. Horne, President, R.C.P.I.	3	3	0
Mr. Lentaigne, President, R.C.S.I.	3	3	0
Dr. Lombe Atthill (Monkstown, co. Dublin) ...	2	0	0
"Melitensis" (Malta postal orders)	2	0	0
J. J. Charles, Esq., M.D. (Portstewart, co. Derry)...	1	0	0
"Sympathy"	2	2	0
"A Practitioner" (Dublin)...	1	1	0
Dr. Arthur Finegan (Mullingar)	1	1	0
Dr. J. Knox Denham (Dublin)	1	1	0
	16	11	0
	22	19	0
Total	39	10	0

ANSWERING LETTERS.

A GRADUATE OF FIFTY YEARS' STANDING writes to complain that the younger members of our calling are now in the habit of not answering letters addressed to them, to the great annoyance and vexation as well as inconvenience of their correspondents. "I have written," he says, "to two of the younger members of the profession within the last few weeks, and my letter, though undoubtedly calling for a reply, remains unnoticed. This has occurred to me now so frequently that I beg you will allow me to publicly protest, through the medium of your influential JOURNAL, against such an ungentlemanly practice."

QUININE IN SYPHILIS.

J. L. L. writes: Your correspondent, "T. A. P." (BRITISH MEDICAL JOURNAL, page 1276), is not wrong in assuming that quinine may exert a similar effect on the *Spirochaeta pallida* that it does on the malarial parasites, because experience has shown that quinine has a most beneficial action in syphilis, especially when combined with mercury. If "T. A. P." will refer to Whitla's *Dictionary of Treatment*, 4th edition, 1902, page 918, he will find there the following prescription:

℞ Hydrarg. c. creta... ... ... gr. j
Quin. sulph. ... ... gr. jss
Pulv. opii ... ... gr. ¼
Ext. quassiae ... ... q.s. Misce.
Fiat pil. Mitte xxxvi tales. Sumat i ter in die p.c.

This combination, or modifications of it, I have used for seventeen years, and I know that quinine was used in combination with blue pill long before that. As "T. A. P." suggests, the absence of anaemia and cachexia under this treatment is most striking.

MEDICAL GOLFING SOCIETY.

THE annual tournament of the Medical Golfing Society will be held at Burnham Beeches Golf Club on Thursday, June 24th. Play will be eighteen holes match play *v.* Bogey under handicap. There will be three prizes in each division—handicap 12 and under, and handicap over 12. The Henry Morris challenge cup and the Medical Golfing Society's gold medal will be competed for. There will also be a foursome sweepstake in the afternoon. Any person on the *Medical* or the *Dental Register* can join on payment of the annual subscription (4s.), which includes entrance to the tournament. Entries, accompanied by subscription and giving lowest handicap, should be sent to L. Eliot Creasy, 36, Weymouth Street, London, W., on or before Monday, June 21st. Conveyances will meet trains at Burnham Beeches Station (G.W.R.). Cards may be handed in till 8.30 p.m.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication: and, if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.